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Address

THE CRITICAL PERIODS IN THE LIFE OF A PHYSICIAN *

W. T. PORTER, M.D. LL.D.

Professor of Comparative Physiology in Harvard Medical School.

BOSTON

The life of a man is marked by certain critical periods. Birth, marriage and death are commonly so reckoned. Their importance, as conventionally defined, is chiefly historical. In this conventional form they may be regarded as erroneous concepts developed during the lamentable and prolonged darkness which preceded the advent of the biologist. We now know that birth and death are inseparable companions. They begin together long before that change of habitat which we ordinarily call birth, and they go on together even after death has plainly the upper hand. What have we, as rational beings, to do with these processes? Nothing. We are born blank. Of death we know even less than of birth. Ages before the Pharaohs, death came mysterious, unsolved, and still so comes. We have no personal data of birth because we are born without the powers of observation and reason. And we have no data regarding death because our powers take flight before death comes.

To the uninstructed marriage will seem in a different category. I will not deny the obvious fact that its incidence is different. Marriage usually takes place about half way up the ascending portion of the curve of life. By that time our reasoning powers are partly developed. I confess, therefore, that we have our wits, but as a biologist I strenuously deny that we are able to use them. In this even the laity will support me, though by instinct rather than by reason. The preservation of species is perhaps the most important of all natural processes. It is wonderfully safeguarded. In the higher animals, and especially in man, a very complicated protective reflex has been created. It is commonly termed falling in love. The term itself illustrates the process. We despise a calculating lover, and at the root of this distaste lies the subconscious fear that the automatic protection devised by Nature may be evaded. When the symptoms of love are properly marked, reason is not only superfluous, but harmful. Fortunately, it is commonly also wholly ineffective. The locksmith himself is proverbially futile. And so while marriage, biologically regarded, possesses academic interest, it is, like life and death, irrational. It can not, therefore, be considered a critical period in the rational life of man.

These critical periods are two. In the first the youth must choose his gods; he must make up his mind what kind of a man he wishes to be. In the second the man whose youth is gone, on whose temples time has laid his warning touch, must ask of these same gods whether life be still worth living.

We are met to-day with men who are about to choose. For twenty years these men of 1908 have studied in the schools. To-day their cloistered life is done. The ocean of affairs lies before them. They must embark, these half-reluctant youths, and lay their course.

This period of choice is not without suffering. During his undergraduate life the student leans on teachers and comrades to an extent he scarcely realizes. Suddenly these props are withdrawn. His teachers shepherd a new flock. They no longer stand *in loco parentis* to the young physician who is now a colleague. Love him they may, interested in his welfare they surely are; but the old collegiate bond is loosed, and the freedom of master toward pupil is no longer permissible. The soothing routine of life in the professional school is also gone. To the creaking of the educational machine succeeds a dolorous silence. The first sensation is of luxurious freedom. Soon, however, painful doubts arise. Is the recent graduate to succeed? Has he mistaken his calling? Is he sure of his own powers?

I can still see with almost distressing intensity the surgical ward in which I applied my first dressing: the long, sunny room with its shining floor; the rows of spotless beds, each with a competent critic active to enjoy the awkwardness of the new doctor, and, most distressing of all, the trained nurse, perfectly appointed from her cap to her noiseless shoes, a miracle of freshness and learning. I am now confident that women know very little more than men; but on that day I would have given anything to be sure of ever knowing half so much as that nurse seemed to know.

Marion Sims was one of the great benefactors of his race—a physician of pure genius. He began practice in a small village in the south. His first patient was a baby. After some days it died. His second patient was also a baby. For a time all went happily. Then came a turn for the worse, and in twenty-four hours this child also was gone. Sims went home, tore away his sign, which was of tin and very large, and threw it down a well. The greater the imagination, the greater the anguish of these early days.

In the midst of these cruel doubts there come insidious temptations. The young man may be offered a harbor under the lee of some commercial enterprise. I know a youth who was tempted by the post of resident physician to a remote industrial village, with a house to live in and an ample salary. He asked advice of two physicians, full of years and honors. One said, very cautiously, that he feared that the distressed young man would be sorry whichever way he decided. The other said it was clearly a choice between present poverty with the hope of distinction, and an immediate competence with a stiffened mind. Trials like these are the

* An address at the first Class Day celebrated by the Senior Class at the Harvard Medical School.

test of an education. An education should harden the spirit against the torture of self-doubt and teach us to welcome poverty with the hope of future service. The value lies in the nature of that service.

Here I would urge felicity of choice. It is strange that in all the years I have been a student no one has lectured me on felicity of choice. Of industry I have often, too often, heard. One would suppose from the tiresome iteration of the word that industry possessed intrinsic excellence. Except as an anodyne, industry has, of course, no value independent of the end to which it is applied. The industry of a thief is not to be commended. Nor is indiscriminate industry of any sort desirable. Students believe that if only they work hard enough they will arrive somewhere. This does not necessarily follow. For unimaginable centuries the earth has worked prodigiously on the moon; but this exemplary satellite has come no nearer. Lessing's raven should know by this time the futility of unintelligent industry.

> The raven observed that the eagle sat on her eggs for thirty days. "And that is doubtless the reason," cried the raven, "why the young eagle becomes the king of birds. Good! I also will do this." And ever since the raven actually has sat on her eggs for thirty days; but thus far she has brought forth only miserable ravens.

On reflection it will appear that felicity of choice is not the only subject of high educational importance omitted in the schools. Indeed, it is probable that the stated education is everywhere merely elementary. The higher education is too subtle for our coarse curricula. It will not take the pedagogic mold. Bounds can not be set to the more precious va'ues, and a definition is in itself a badge of inferiority. Who shall define the skylark's song that ravishes the soul from earth and bears it up to heaven? That which can not be defined in words can not be conveyed by them; but I may say that the end for which we would scorn delights and live laborious days is personal. It is the happiness of regarding the world from the standpoint of the philosopher.

There died not long ago in Leipsic a famous physiologist—Carl Ludwig. The older English and American physiologists were most of them his pupils. Never was there a teacher like him, at least in his own science. Lucidity of mind, an extraordinary insight into phenomena, and a marvelous skill in the invention of methods were in him united with a most lovable disposition. His high enthusiasm burned undimmed for more than fifty years. To Ludwig's laboratory I made a pilgrimage some months before his death. The simple rooms from which had come so many glorious discoveries were filled with pupils at research. On my venturing to say that it gave us all new faith in life to see him still so fruitful—he was then 72—he replied that his only grief was that he must leave off just when it was most interesting.

Ludwig's life was spent in observation, reflection, experimentation and further reflection. The method of every philosopher is the same, and this same union of observation, reflection, experimentation and further reflection will lead the young physician to the highest honors in his profession and to the largest personal happiness.

I do not mean that happiness shall be pursued. The Declaration of Independence was necessarily in some respects a shallow document, and nowhere more so than in the celebrated phrase "life, liberty and the pursuit of happiness." Our life is at the disposal of any infected wretch who asks it; liberty is unsocial and in our complex society practically unattainable; and happiness flies from pursuit. In the career that I propose as the most desirable, the young physician and philosopher thinks not of life nor of liberty, and turns his back on happiness. His single aim will be the public service. Yet experience richly shows that lives thus spent are happiest in the end. And, further, they are perhaps the only lives that pass unscarred through the second critical period.

As age steals on there comes a weary time. The pleasures of youth are gone; the energy which seemed inexhaustible is plainly waning; a taste of reputation has shown that it can not satisfy; cares increase, and an inevitable acquaintance with evil seems to make the whole world gray. The youth doubts his own fitness for the struggles and rewards of life; but the older man disillusioned and perhaps embittered, questions life itself.

> Many a green isle needs must be
> In the deep, wide sea of misery,
> Or the mariner, worn and wan
> Never thus could voyage on
> Day and night, and night and day,
> Drifting on his weary way,
> With the solid darkness black
> Closing round his vessel's track.

Then comes the supreme test of education. The physician who is also a philosopher endures this test. To him neither disillusion nor bitterness are possible, and the evil of the world is more than balanced by the good. Nor does he grow old. It is experience in the sense of repetition that makes one old; experience, in its true sense of experimentation, is the fountain of youth. To the philosopher life is a succession of problems, each more interesting than the last, and at the end he lies down, tired, perhaps, but grateful.

The training which creates the experimental state of mind is easier to obtain at the present day than even twenty years ago. The medicine taught in the schools was once almost wholly didactic. The freedom of dissection, won after a hard fight, afforded training in observation. The introduction of chemical laboratories, and later of practical work with the microscope, greatly enlarged this training. Observation now became the principal discipline of the medical school. At present the requirement of physiologic experimentation and the opportunity for the first-hand diagnosis of disease at the bedside are beginning to weaken the undue emphasis still laid on observation and to establish the pedagogical value of scientific reasoning controlled by rigid experimentation. Yet the battle for a schooling that shall teach men to think is hardly begun. It has always been a difficult fight, and it is made greatly more difficult in medicine by very interesting conditions.

Medicine was once practically an art. It has been widened by the entry of many sciences. Expanding irresistibly with the new spirit, Medicine has broken the hereditary bonds that fettered her as they still fetter Theology and Law. Medicine in her new state is a complex of sciences and arts. It is here that the difficulty lies. For the making of new discoveries, the coming of these new sciences into this ancient profession is an unmixed blessing. For the healer at the bedside science is an advantage only when its relations to empiricism are clearly understood. The practical physician must often be purely empirical. He is sum-

moned to a house hushed in the fear of death. The mother weeps by the bedside of her only child. This is no place for the slow processes of a rational science. Speed and an accurate empiricism will here alone save life—morphin for the pain, an antipyretic for the fever—the fruits of science, doubtless, but not the method. Cases such as these often make the practicing physician impatient of science. He is right so far as he goes. At the bedside science is sometimes a hindrance. Yet in many, perhaps most, cases the methods of rational science may be applied to the diagnosis and the healing of disease with results unobtainable by empiricism.

But the healing of the sick is only a part of the duty of a physician, and for those who have the necessary originality of mind it is the lesser part. A patient is an individual, a social unit, and while his death may be a public misfortune, its importance is infinitesimal compared with the conquest of disease. The benefits of a discovery in medicine are cumulative. The individuals whose premature death was prevented by the new discovery live out their lives, but soon are gone. The knowledge that gave them their peaceful old age lives on and on, generation after generation.

The state of mind that leads to discovery is not to be had from books or the routine of schools. Always it has been a personal tradition handed down from master to pupil in the long line of those who have sought to still the cry of suffering by discovering its cause. It was Hippocrates who exclaimed: "God-like is the physician who is also a philosopher!" And he will be happy.

Sweet hope shall cherish his old age.

As the years pass he will more and more believe that many, if not all, the plagues that now make life so hard will be overcome by those to whom, as youths, he may perchance himself hand on the torch.

Original Articles

HYSTERICAL BLINDNESS

NOTES OF THREE CASES, ONE OF WHICH EXHIBITED ASTEREOGNOSIS *

THEODORE DILLER, M.D.
PITTSBURG, PA.

Kerneis[1] collected in 1902 from the literature thirty-four cases of bilateral hysterical amaurosis, to which de Schweinitz,[2] who quotes him, adds several others which were published later, and I have been able to find four additional cases myself.

Hysterical blindness may be of sudden or gradual onset and affect one or both eyes. It may last from a few hours to several years and may be intermittent in character. Hasenknoff[3] reports a case of recurring hysterical blindness in a boy, aged 10 years, with astasia-abasia and hysterical vomiting. In all recorded cases vision was sooner or later restored, so the prognosis is good.

Blindness, in the absence of inflammatory changes, and with normal fundi and pupillary reaction, is strongly suggestive of hysteria. Sudden onset and sudden termination also argue for this diagnosis and indeed hardly admit of any other. Among the other symptoms accompanying hysterical blindness have been ptosis, nystagmus, strabismus and conjugate deviation. Commonly, in the recorded cases, there have been other manifestations of hysteria, but amaurosis may be the sole expression of it, as in a case reported by Dieulafoy.[4] Unilateral hysterical amaurosis occurs rather more rarely than the bilateral form, according to Kron, and offers different diagnostic problems. But bilateral hysterical amaurosis is almost as rare an affection. The following case, therefore, appears worthy of record:

CASE 1.—*Patient.*—A man, aged 49; married twenty-five years; a painter by occupation. He smoked and chewed a little; but did not drink and never had acquired venereal disease. He lived in a small country town and his life had been quiet and uneventful. He had worked regularly at his occupation and was never off work on account of serious illness.

Present Illness.—On Jan. 1, 1907, he escorted his daughter, who was making a little trip, to the train. He carried her bag into the car; and while there was suddenly stricken with blindness in both eyes. He had to be led from the car. The blindness was almost complete. He could just distinguish light from darkness. At the end of a week he consulted a physician who did eye work, and was under his care for two months, during which time vision slowly and gradually improved. He was now able to see headlines in the newspaper but not to read ordinary print. His vision remained in this stage until June, 1908, when he came to Pittsburg and placed himself under the care of an irregular practitioner who told him he had a tumor in the brain, and who treated him for six weeks. The treatment consisted in the passage of electricity through the eyes. He was considerably improved by this treatment, and the improvement continued for a time after he returned to his home in the country. Then it remained stationary for about two months. Since about July, 1908, the vision had been gradually failing. In June, 1908, on awakening one morning, the patient found that he was paralyzed in the right forearm and hand from a point a little below the elbow downward and there was a complete loss of feeling in the hand, which felt numb. He gradually regained nearly all the lost muscular power, but only to a moderate degree did he recover the lost sensation in the hand. There seemed to be no trouble from the elbow upward. The "paralysis" (really sensory loss) made the hand useless; and even although the "paralysis" was improved at the time of the first examination the hand was still almost useless because the patient could not feel or distinguish objects with any certainty.

Nothing unusual had occurred at or just before the time of the onset of the blindness. The patient had been out of work for a week, but he was not worrying on this account, as he expected to return to work very shortly. He was not worried or agitated over anything. I subsequently learned by observation and historical data that the patient was a weakling in character, prone to fits of anger, petulance and resentment. He had been hard to live with. On one occasion, several years ago, he made an attempt to cut his throat. The scar present indicated that the cut penetrated no deeper than the skin.

General Examination.—October 17 and the three succeeding days. The patient was led into my office by his daughter as though he were totally blind; and his attitude and gait suggested that of the blind man. He moved his whole head to see an object. The vision was, however, about 20/40 in each eye. With the dynamometer he registered 50 with the right hand and 60 with the left. The knee-jerks were normal.

Sensation: There was almost complete loss of pain sense over the right forearm and hand from a little below the elbow. Over the rest of the body there was considerable diminution of pain sense but nowhere else entire loss. Conjunctival reflexes were lost. Contact sense was normal. With the eyes closed the patient could not tell in what position his fingers of the right hand were placed.

Stereognostic Sense: The patient was unable to recognize objects placed in the right hand. The movements he made

* The first patient was shown at a meeting of the Pittsburg Academy of Medicine, Oct. 27, 1908.

1. Etude sur la cécité hystérique ou amaurose hystérique totale et bilaterale, Bordeaux, 1902.
2. Eye and Nervous System, p. 614.
3. Charité-Ann., 1906, xxx, —.
4. Dieulafoy, R.: Rev. neurol., 1907.

were clumsy and not adapted to recognize the object in his hand. The object often fell from the hand. He used this hand very little in dressing and undressing himself. He said it was useless.

Ocular Examination.—The eyes were carefully examined by Drs. Markle and Curry; the former furnished the following report of his examination: "Oct. 21, 1908, examination of the eyes of H. G., aged 49, showed visual acuity in each eye of 20/40. The pupils are 3½ mm. in size and are equal. The irides react to light promptly, also to accommodation. There is a slight hyperopia or far-sightedness (one-half diopter), with presbyopia, the correction of which gives distant vision equal to 20/30 in either eye and enables him to read readily Jaeger No 1 type. Other than a slight esophoria (one degree) no imbalance of the extraocular muscles exists and no limitation in any direction in the excursion of the eye could be detected. The ophthalmoscope showed clear ocular media and normally appearing fundi. The visual fields indicate enormous concentric contraction and are of the tubular form, i. e., the fields show great contraction and remain the same absolute size

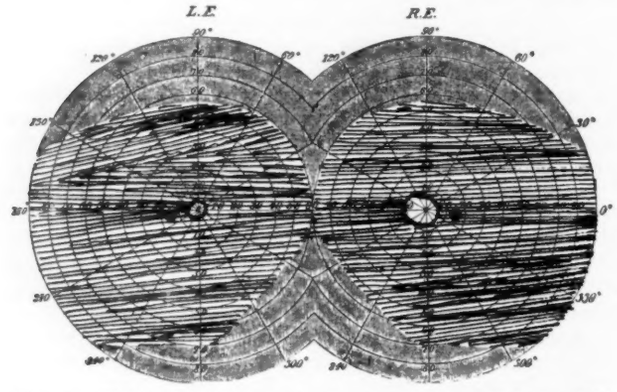


Fig. 1.—Field of vision (tubular in character) on Oct. 21, 1908. O. D. V. = 20/40; O. S. V. = 20/40. The patient named white, yellow, red, green and blue (mm. disc) correctly at central fixation point. No scotomata.

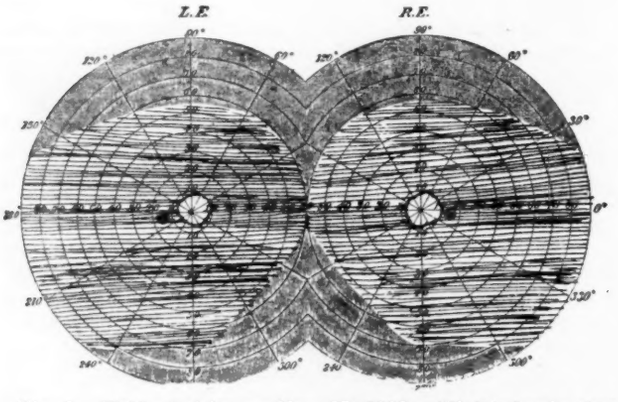


Fig. 2.—Field of vision on Nov. 25, 1908; still tubular in character. O. D. V. = 20/30; O. S. V. = 20/30.

no matter how far distant the patient may be from the point of fixation. There are no scotomata. The field for color, red, green and blue, is equally extensive but is not greater than the form field. A second field taken five weeks later (November 25), as shown by the appended charts (Figs. 1 and 2), reveals essentially the same or but slightly increased area in the visual field. At the later date the visual acuity equalled 20/30 in either eye without glasses."

Course of Illness.—Under suggestive treatment and enforced exercises the patient acquired much greater use of the hand; and he learned to dress himself and to go about alone, etc. But he never seemed to me very anxious to get well.

This case presents several interesting features: the sudden blindness, and later sudden monoplegia with loss of pain sense, the loss of stereognosis sense in the affected member due apparently to loss of muscular and articular sensation, and contracted visual fields of the tubular variety. It is very interesting to note that astereognosis may be a hysterical manifestation. It is, however, on the ocular manifestation that I wish to comment particularly in this paper. So I shall not now consider these other interesting points.

Looking over my case-book, I find records of two other cases of hysterical blindness which I desire to mention briefly:

CASE 2.—Several years ago I saw a man whose case was an undoubted one of major hysteria. He had had a monoplegia and later a hemiplegia; the former was transferred from one arm to the other and from one leg to the otner. He gave a history of having been blind or nearly blind for a period of two months one year previously. He could see only fingers before his face. During these two months the blindness improved and grew worse several times. Examination of the eyes was negative.

CASE 3.—I have also notes of the case of an unmarried woman, aged 25, who was examined ten years ago by me. Her case was also an undoubted one of major hysteria of the most pronounced type. She had at that time been ill for three years. For fourteen months of this time she had been confined to bed on account of paralysis of all four limbs. Latterly the paralysis had been hemiplegic in character. She was subject to severe convulsive attacks. When I saw her the hemiplegia was improving and she suffered from contracture of the third and fourth fingers and with marked degree of amblyopia. She had only slight vision, enough to enable her to distinguish persons, and what vision she had appeared to be central. Her eyes had been examined by one of our most competent ophthalmologists who was unable to discover any organic disease. He recommended the use of the galvanic current passed through the eyes, which prescription I carried out. This amblyopia persisted for several months. I met this patient on the street about a year ago looking the picture of health; she appeared to be happy and in the best of spirits. She had been happily married three or four years previously.

Westinghouse Building.

THE BLINDNESS OF HYSTERIA

H. GRADLE, M.D.
CHICAGO

It has long been known that in hysteria disturbances of sight occur comparable to the anesthesia in other sensory regions. In relatively rare instances the disturbances may amount to one-sided or double-sided complete transient blindness. More common, however, is the mere reduction of sight usually associated with contraction of the visual field and some disturbance of color perception. As the full literature is readily accessible in de Schweinitz's excellent article on hysteria[1] it is unnecessary to repeat it here. My main object in relating my own experience is to show that the problem of psychic diminution of sight is a live one and not merely an academic question, since neurologists often quote the statement that the hysterical patient is neither conscious of nor annoyed by a certain degree of one-sided or even double-sided visual imperfection. My experience has shown me that the real importance of psychic influences on the eye is more apparent in the oculist's office than in the neurologic clinic.

I shall arrange my material in different groups and begin with the most striking type.

DOUBLE-SIDED COMPLETE BLINDNESS

The most dramatic instance was that of a middle-aged woman in the practice of Dr. Ritter, who called me into consultation.

1. In Posey and Spiller's Eye and Nervous System. 1906.

CASE 1.—The patient, hitherto in good health, had had a severe shock to her feelings the previous evening, and clapping her hands to her eyes to shut out the sight, found herself absolutely blind. No objective reason could be found for the blindness, while the freely mobile pupils showed that light was perceived at least by the lower centers. Yet she could not tell the direction of the window. Her great anxiety to be cured made the prognosis favorable. She was told to gaze toward a distant clock with the understanding that a few minutes' electric treatment would enable her to see the clock distinctly and without fail. A mild faradic current applied to the temples and "suggestion" restored normal sight permanently.

According to Kron there were but 26 cases of bilateral hysterical blindness reported up to 1902. While some of these were cured by suggestive measures at once or speedily the disturbance persisted in others for variable and long periods of time with occasional relapses.

ONE-SIDED HYSTERICAL BLINDNESS

One-sided hysterical blindness was found by Kron reported only 23 times. It is probably not very rare but is not usually put on record. The following is a good example.

CASE 2.—*Patient.*—D., a vigorous young man of 20 years had accidentally had a porcelain knob thrown at him six weeks ago, since which time he claimed to be blind in the right eye. He had been under treatment in the country and wanted my opinion as to the probability of recovery.

Examination.—A small scar slanting through the right brow was evidently limited to the skin. The orbital margin felt sound. The right eye was objectively normal in every way like the left and the pupillary actions of both were perfect. The left eye had normal V. and normal field. The patient denied all perception of light in the right eye. By throwing light alternately into each eye with the ophthalmoscope I could convince myself that the patient could localize correctly with the blind eye. There was also a distinct compensatory movement of the blind eye when weak prisms were placed before it while watching a light. These tests, and especially the normal play of the pupil, showed at least a moderate perception of light in the right eye of which the patient claimed to be unconscious. The promise of a good prognosis and various suggestive manipulations, like electricity, had no immediate effect on the psychic blindness. Yet there could be no doubt about the psychic nature of the blindness. For, had the optic nerve been injured by the accident, partial atrophy would have been recognizable after the lapse of six weeks. In the present case there was no reason to suspect simulation. The patient wanted no testimonial and seemed anxious for a good prognosis. Besides there was no question of any damage suit or insurance considerations.

As the patient did not return I know nothing of his subsequent history except that he was examined by two colleagues within the next two weeks with the same findings.

The distinction between hysteric—or let us say psychic—blindness and wilful simulation can not be based on objective findings. They would be the same in both cases. We must base our judgment on a psychologic analysis of the patient's mind and object. I have seen two other instances of alleged one-sided blindness following a trivial traumatism in which examination led to the same results as in the above-quoted patient. There was no demonstrable lesion, there were normal pupillary reaction and compensatory movements of the blind eye under a prism which would have caused double sight and yet any sensation of light was absolutely denied. But as both those people were anxious for damages and did not seem particularly pleased with my definite assurance of recovery I unhesitatingly qualified them as malingerers. I may of course have been influenced somewhat by mannerisms of the patients which one can hardly describe but which impress the observer as regards their sincerity.

Much more common than total blindness of psychic origin is moderate impairment of sight in hysterical subjects. Observers of Charcot's school (Parinaud and Gilles de La Tourette) have often found in hysterical people moderate amblyopia, mainly one-sided, contraction of the visual fields, particularly for colors and with this not uncommonly anesthesia of the front and the neighborhood of the eye. These observations lose much of their importance from the fact that the subjects are either not conscious of them or at least are not annoyed by them in their every-day life. Like some of the other stigmata of hysteria they are either brought out or at least accentuated by the examination.

PARTIAL IMPAIRMENT OF SIGHT IN OTHERWISE NON-HYSTERICAL SUBJECTS

Of greater clinical significance are interference with good vision complained of by people who are otherwise not suffering from hysterical manifestations, or at least not at that time. In my observations of such cases I have found neither contraction of the visual field nor marked changes in the fields for colors such as reversal of the limits of red and blue. My suspicions regarding the psychic origin of sight impairment in a number of such cases were based on the absence of other explanations and the emotional instability of the subject. But the diagnosis of hysterial or psychic amblyopia was considered established only when the condition had proved fugitive and the prolonged observation had excluded all other explanations. The following cases illustrate some of the various clinical aspects.

CASE 3.—*History.*—R., a salesman, aged 35, stated that his eyes had been in satisfactory condition until within the six weeks preceding examination. He noticed an occasional blurring, at first only in reading, later on too, in distant vision, and thought that the right eye was at fault wholly or at least much more than the left. At least three weeks, but probably longer, the lids troubled him, especially on the right side and the trouble was increasing.

Examination.—The left eye was objectively normal except for a slight chronic conjunctivitis. V. = 20/35, with cyl. + 0.5 axis 90° V. = 20/20. The right eye showed considerable acute inflammatory swelling of the edge of the upper lid, with pronounced catarrhal conjunctivitis, but with very scant secretion. The eyeball was pale, pupil, media and fundus normal. V. = only 20/80, not improved by any glass. The near point was about eight inches for either eye. The field for white and colors was normal and there was no scotoma.

Course of Illness.—The cause of the dimness in the right eye was not clear. Careful testing showed that it was not due to mucus floating on the cornea or to regular astigmatism. There were no symptoms suggesting any disease of the optic nerve. Neither the history nor the physical examination pointed to hysteria. But there was an emotional display in the man's answers to questions and an exaggerated anxiety in his manner that, together with the enfeebled accommodation, made me suspect that his amblyopia might be of psychic origin, perhaps induced by the pressure exerted by the inflamed lid on the cornea. Accordingly I gave him as positive a promise regarding the recovery of sight as seemed warranted, and confined the treatment to local applications for the inflammation of the edge of the lid and conjunctiva (nitrate of silver, zinc sulphate solutions, Credé's ointment of soluble silver). Three days later the external condition had improved without the formation of the stye which I had expected. His sight seemed clearer to him but was not objectively changed. Field normal even for colors. On the seventh day the lid was practically well, and V. was found 20/25 in the right eye, and the accommodation in both eyes improved so as to enable the patient to read without fatigue.

When seen a few weeks later he was found normal in every respect.

CASE 4.—*History.*—Miss F., cashier, 20 years of age, had been nervous, apparently from close confinement to work. On account of slight asthenopia she had been wearing cyl. 0.50, axis 90. She was also said to have had slight convergent strabismus in former years. Without known cause she felt on the day before examination a "snap" in the left eye, had since seen very poorly with that eye and had besides a dull ache in the rear of the head.

Examination.—Objectively both eyes were normal in every way and the pupillary reaction was normal. The right eye had V. = to 20/40 plus with her glass. Accommodation and field were normal. The left eye only saw the hand at six feet and recognized no colors but had intact field. The patient was given antipyrin for the headache and a dose of calomel.

Course of Illness.—Two days later the patient returned feeling much better. The sight of the right eye was still below par (20/40) but the left eye with correction had nearly as good sight as the right and could now see all colors. More accurate testing showed a hyperopia alike in both eyes amounting to 0.75 D with 0.50 D astigmatism, confirmed under homatropin. There evidently had been a former convergent strabismus of the left eye which the patient had outgrown spontaneously, for there was still an occasional tendency to convergence, alternating with binocular fixation. On account of some asthenopia, mainly due to anemia and nervousness, she was seen off and on for two years subsequently. With the exception of one other period of dimness of the left eye lasting half an hour she retained a sight of nearly 20/30 (with correction) in both eyes.

HYSTERICAL EXAGGERATION OF CONGENITAL AMBLYOPIA

The next instance in which the inferiority of one eye, probably congenital, was exaggerated psychically was much more difficult of interpretation.

CASE 5.—*History.*—V. A., a boy of 11, had been a frail child and passed through a variety of children's diseases. Three years before the present trouble he spoke of poor sight in the left eye, was treated and said to have been improved, but again claims since a short time that with the left eye he could only perceive light. He also complained somewhat of discomfort on using his eyes.

Examination.—The patient was a frail-looking boy, mentally well developed, somewhat anemic, though otherwise now in good health but restless, fidgety and emotional, with an extremely long and high but narrow skull. Both eyes were externally normal, and there was no visible strabismus. The right eye was perfect with a hyperopia of 0.75 D. The left eye could barely tell a light but the pupil reacted normally and light in the left eye influenced the pupil of the right eye. The ophthalmoscope showed a healthy eye but with an anomaly which seemed to me a malformation. From the normal papilla there protruded three short club-shaped or stem-like opacities into the vitreous, while a longer one, apparently the remnant of the hyaloid artery, passed from the center of the disk forward to about the middle of the vitreous. The anomalies, probably congenital malformations, were not inconsistent with good vision in view of the integrity otherwise of the disk and fundus. That there was fair sight was shown by the normal pupillary reaction both direct and consensual. On the other hand, prisms could evoke neither double sight nor compensatory movements of the eye said to be blind. It seemed more probable to me therefore that this eye with congenital anomaly had defective central sight. The alleged total blindness I considered hysterical.

Course of Illness.—Iron was prescribed and the faradic current used on the temple with a hint that it would have to be used stronger if not effectual soon. A few days later the boy returned with the ability to count fingers at ten feet and with normal vision and color sense. This condition did not change any further within a month's observation.

MALINGERING AND HYSTERIA IN CHILDREN

It is difficult in children to draw a sharp line between wilful misrepresentation and real psychic interference with sight. Youngsters with vivid imagination are apt to consider disturbances created by their fancy or ideas as real. For instance:

CASE 6.—A boy of 8 years was brought to me because he could not see writing on the blackboard in school. I found no objective reason why he should not have perfect sight, but I could not get him to read more than 20/200. This poor vision was somewhat improved by almost any weak glass. By using a slightly disagreeable faradic current with the implied threat that it would have to be made stronger I raised the sight at once to the normal standard. After a short vacation and some iron for the anemia there was no further trouble.

The diagnosis is more difficult when suggestive influences do not improve the sight promptly. My general experience in hysterical conditions has been that immediate cures can be expected only in cases of very recent onset, while a persistence of symptoms for weeks makes it unlikely that they will yield to any influence. The following is a good illustration of psychic impairment of sight in a child:

CASE 7.—*Patient.*—S. H., a healthy boy of 10, had complained of slight watering and discomfort in the eyes and thought he did not see well. His music teacher had observed that he did not recognize his notes well.

Examination.—Aside from a slightly follicular conjunctivitis the eyes were perfect in every way and emmetropic. But the sight with either or both eyes was only 20/100, perhaps improved a trifle by different glasses, especially concave glasses. Nothing additional was gained or learned by the use of homatropin. The patient's visual fields were capriciously constricted and, as Greef has described it, apparently tubular, that is to say the area which he claimed to be able to see was not larger on a distant wall than it was on a sheet of paper close to the eye—as if he were looking through a tube. His answers concerning colors are contradictory and the field for blue seems smaller than for red.

Course of Illness.—My diagnosis of hysteria was based on the want of objective findings, the contracted and tubular field of vision and the contradictions regarding colors. But suggestion, glasses and electricity did not materially increase his sight while under examination. The frequent frowning and blinking seemed to suggest that conjunctival irritation was the origin of his symptoms. I ordered a sulphate of zinc solution without further directing his attention to the eyes and suggested an out-door life with rest of the eyes. One week later the patient had normal sight, normal field and color sense.

The case is not an isolated one in my experience. I could collect probably half a dozen similar ones from my case books, though none of them are quite as striking and conclusive as the present one.

100 State Street.

THYMOL AS A SOURCE OF ERROR IN HELLER'S TEST FOR URINARY PROTEIN *

WILLIAM WEINBERGER, M.Sc., M.D.
NEW YORK

It is a well-known fact that the ordinary tests for urinary proteins, especially for serum proteins, are not specific. Several concordant tests are necessary for satisfactory differentiation. Reliance on a single test often leads to error; a disturbing factor may prevent the detection of a substance that is present or may simulate the behavior of a substance that is absent. It is the object of this paper to present some observations on a disturbing factor in Heller's test.

The tests most frequently used by the general practitioner for the detection of serum protein in the urine are: (1) The heat test—coagulation by boiling aided

* From the Laboratory of Biological Chemistry, Columbia University.

by a slight proportion of acid; (2) precipitation by potassium ferrocyanid in the presence of acetic acid, and (3) Heller's test—precipitation by concentrated nitric acid.

As stated above, none of these reactions is specific for any of the serum proteins, the proteins in the urine about which the physician is mostly concerned, as a rule. *Boiling* the urine precipitates albumin and globulin under certain conditions, e. g., at a certain degree of acidity, but may fail to precipitate them under others. According to the nature of the acid used—nitric or acetic acid—a greater or less acidification will vitiate results. Addition of either of these acids is necessary to guard against the interference of basic phosphates in alkaline or neutral urine. On the other hand, addition of acetic acid in moderate excess will not only dissolve phosphates, but will cause the formation of soluble acid albumin. Nitric acid, if added in too small a quantity, will tend to convert a portion of the basic into the acid phosphates, allowing albumin to remain in solution. An excess of nitric acid will redissolve albumin, especially if the urine should be heated *after* the addition of the acid.

The potassium ferrocyanid-acetic acid test is one of the most reliable and accurate, although the albumoses, nucleoalbumin and urates have to be differentiated. In this test, however, it is often difficult to attain the most favorable volume relation between acid-salt solution and urine.

It is obvious, therefore, that there are urines in which neither the heat test nor the potassium ferrocyanid test will allow an unequivocal interpretation—a situation that occurs frequently in connection with urines containing particularly small proportions of serum proteins. In such cases S. Fraenkel[1] and others most urgently advise the use of Heller's test. Its technic is well known.

In this research, the test was applied as follows: 5 c.c. of concentrated nitric acid were poured into a test tube, the tube was then inclined and, with the aid of a pipette, urine was directed slowly down the side to prevent mixture of the liquids. In this way two sharply defined strata are obtained. Along the line of contact a ring appears if the urine contains albumin or globulin or certain other substances.

According to Hammarsten,[2] "there is hardly another test for protein in the urine which is at the same time so easily performed, so delicate and so positive as Heller's if the possible errors and the means by which they may be prevented are borne in mind." What are these sources of error?

The principle of Heller's test is the precipitation of acid protein by concentrated nitric acid. Any chemical constituent of the urine precipitable by the action of concentrated nitric acid will, therefore, be apt to give misleading results. Here again Hammarsten[2] may be quoted:

> In a urine rich in urates a complication may occur, due to the formation of a ring produced by the precipitation of uric acid. The uric acid ring does not lie, like the protein ring, between the two liquids, but somewhat higher. For this reason, two simultaneous rings may exist in urines that are rich in urates and do not contain very much protein. The disturbance caused by uric acid is easily prevented by diluting the urine with from one to two volumes of water before performing the test. The uric acid now remains in solution and the delicacy of Heller's test is so great that, after such dilution, only in the presence of insignificant traces of protein does this test give negative results. In a urine very rich in urea a ring-like separation of urea nitrate may also appear. This ring consists of shining crystals, and it does not appear in urine previously diluted. A confusion with resinous acids, which also give a whitish ring with this test, is easily prevented, since these acids are soluble on the addition of ether. Stir, add ether, and carefully shake the contents of the test tube. If the cloudiness is due to resinous acids, the urine gradually becomes clear, and on evaporating the ether a sticky residue of resinous acids is obtained. A liquid which contains mucin does not give a precipitate with this test, but it gives a more or less strongly opalescent ring, which disappears on stirring. The liquid does not contain any precipitate after stirring, but is somewhat opalescent. If a faint not wholly typical reaction is obtained with Heller's test after some time with undiluted urine, while the diluted urine gives a pronounced reaction, the presence is shown of the substance which used to be called mucin or nucleoalbumin.

From this quotation it will be seen that the degree of concentration of the urine is an important factor in the behavior of protein toward the concentrated nitric acid of Heller's test. In this connection the following observations made by Hallauer[3] may be of interest: If to urine which has been concentrated on the water bath, albumin has been added, the heat test will be intensified as compared with normal urine containing the same amount of albumin, whereas both Heller's test and the potassium ferrocyanid-acetic acid test fail to show the presence of any albumin in the concentrated urine. If the latter be diluted, the last mentioned tests will again become positive. In urines concentrated beyond a certain degree even the heat test will be negative, and this occurs even in the presence of large amounts of albumin. Dilution of the urine will give here the same result as before. The usefulness of diluting concentrated urine before testing for albumin is very evident.

Another source of error in Heller's test has been discovered in this laboratory. It is rarely possible, even in hospital practice, to make a thorough qualitative and quantitative examination of the urine in the vicinity of the patient or shortly after micturition. Very often either a sample or the total daily quantity of the urine has to be sent quite a distance to a chemical laboratory or to the medical examiner of a life insurance company. There is plenty of time for chemical changes to take place in the urine, be it a change in the reaction and the consequent precipitation of otherwise soluble material, or fermentation and decomposition of the different constituents of the urine. To obviate these disturbing occurrences, preservatives are commonly employed.

Of the large number of chemicals proposed as urine preservatives, toluol, chloroform, formaldehyd, sodium fluorid and thymol are the ones most frequently used. The use of toluol as a urinary preservative is still in the experimental stage. "Chloroform[4] is unreliable in many instances. If a urine has a high specific gravity, the preserving action is greater than when the specific gravity is 1.021 or less." We know that Nylander's test for sugar may be negative in the presence of chloroform in the urine.

> The value[4] of formaldehyd as a preservative is well known, but as a urine preservative it has its limitations, particularly if not used in proper quantity. The chief danger is in using too much. . . . Perhaps the most objectionable feature of this preservative is its reducing action on Fehling's solution.

1. Descriptive Biochemie, 1907, p. 578.
2. Textbook of Physiological Chemistry, 1907; translated by Mandel, p. 641.
3. München med. Wchnschr., 1903, 36, 1539.
4. Ogden: Boston Med. and Surg. Jour., 1905, p. 718.

This occurs when several drops of the formaldehyd solution have been added to a small specimen of urine (4 ounces). The copper test for sugar can not, therefore, be used, but other tests must be utilized. Formaldehyd reacts in a peculiar manner with phenylhydrazin, producing an abundant noncrystalline deposit, which, of course, is readily distinguished from phenylglucosazone by the fact that it is noncrystalline.

Kenney[5] has found that when four or more drops of the 40 per cent. solution of formaldehyd are added to an ounce of urine a distinct reaction for albumin is obtained in Heller's test. If, therefore, too much formaldehyd has been used for preservation this test for albumin becomes unreliable. We know, furthermore, that formaldehyd reacts with uric acid, and that the reaction for indican is seriously interfered with and the detection of the bile acids is rendered impossible. It follows from this that the use of formaldehyd as a urinary preservative may give unreliable results.

There remain sodium fluorid and thymol. According to Cronheim,[6] these alone answer the two requirements of a reliable preservative, i. e., maintenance of sterility even if added in a small proportion without causing changes that alter the caloric value of the latter. While it is known that the use of sodium fluorid is attended by the precipitation of calcium salts from the urine, thymol until recently was considered an absolutely safe preservative. "Thymol[4] does not, so far as I know, interfere with any of the tests usually applied to the urine." We have been making observations in this laboratory lately which show that thymol is not so indifferent in this connection as it was supposed to be. Welker[7] found here that, on applying the iodoform test for acetone to distillates from urines preserved with thymol, a pink or red coloration was produced which, while not completely destroying the usefulness of the above test, certainly increases the difficulty attending its application. Rosenbloom will shortly report from this laboratory another fact showing how the presence of thymol may account for unexpected results in an ordinary urinary test.

In the course of our investigation of another problem, a new source of error has been found in urines preserved with thymol in any of the usual ways. If Heller's test is applied to such urine, after filtration, a ring will invariably appear even in the absence of protein. The ring is most marked, all other things being equal, in urines that have been treated with a solution of thymol, although it is very conspicuous in urines that have been preserved with powdered thymol.

The characteristics of this ring may be briefly stated as follows: A few seconds after the urine has been carefully poured on the acid there forms precisely on the line of junction a grayish-white ring about 0.5 mm. high, resembling the ring given by a faint trace of albumin, which gradually becomes more and more distinct, until in some urines, under conditions to be mentioned later, it presents the appearance of a heavy thick precipitate, the height of which gradually increases and renders the lower portion of the urine completely opaque. At this stage the color is more yellowish than that of a protein ring. Below the ring there is a greenish zone extending somewhat into the acid, above it a reddish somewhat smaller zone. The whole ring is best seen by daylight reflected against a dark background; the color rings are best seen if the test tube is held against a white background. On slightly disturbing the layers of urine and acid the ring, if a delicate one, disappears at once but gradually reappears. These effects can be obtained several times in the same mixture. A heavy ring, however, will not completely disappear on slight shaking, but will gradually widen and extend into the upper urinary layer; and it depends on the volume relation between urine and acid whether complete mixing will remove the precipitate. On thoroughly shaking an excess of acid with a little urine, a clear yellow solution results. If an excess of urine has been used, the mixture will not clear up, but will remain turbid. Warming the mixture will not prevent the formation of the ring, nor will it clear the liquid, but, if anything, will make the reaction more distinct. Dilution of the urine with three to four times its volume of water has no prohibiting effect.

As has been indicated, the above reaction is caused by thymol dissolved in urine when the latter is treated with it even in solid form, and it is noteworthy that more thymol is dissolved if the urine is neutral or alkaline than when acid. Accordingly, an alkaline thymolized urine will give Heller's test more pronouncedly than a strongly acid one. But while the thick and heavy ring in the first case will have an appearance somewhat different from the protein ring and thus will hardly mislead the observer, the delicate thymol ring in the acid urine closely resembles a protein ring and is, therefore, more apt to cause uncertainty.

In urine containing both albumin and thymol in various amounts, each ring may be discerned. The albumin ring is wider (from 2 to 3 mm.) and white, whereas the thymol ring forms underneath it and is gray and thinner. The albumin ring may also be completely covered by the thick thymol ring, so that the detection of protein may be seriously interfered with.

Somewhat detailed investigation has shown that this ring consists at first of thymol precipitated by the concentrated acid. At this stage it closely resembles the albumin ring. Soon nitration of the thymol occurs resulting in the formation of nitroso-thymol and possibly also nitro-thymol. This accounts for the gradual color change from white to yellowish white which the precipitate undergoes.

A partially successful attempt has been made to isolate the nitro substance or substances produced. With the aid of chloroform as the solvent, crystals of a yellowish-brown color were obtained that gave Liebermann's nitroso-reaction. These crystals melt at a temperature slightly above 50 C., whereas nitroso-thymol melts at 160 C. Thymol melts somewhat below 50 C. It is probable, therefore, that very incomplete nitration occurred and that the brown crystalline product referred to was a mixture of thymol and a small amount of nitroso-thymol. Besides, some chloroform was doubtless occluded in the crystals.

From the above description of our findings with Heller's test as applied to thymolized urine, it is obvious that the nitric acid test must be modified, if it is to be a reliable test for serum proteins in such urines. It can not be applied directly to urine preserved with thymol. The latter must first be removed by extraction. Petroleum ether is very suitable for this purpose. Gentle agitation of the urine with an equal volume of petroleum ether for two minutes suffices to remove practically all traces of thymol.

5. New York Med. Jour., 1904, p. 403.
6. Engelmann's Arch. f. Physiol., 1902, suppl., p. 262.
7. Welker: New York Med. Jour., 1907, p. 552.

Since thymol is occasionally administered internally as a vermifuge in cases of ankylostomiasis, the question arose as to whether urine excreted under such conditions may not, on account of the presence of thymol derivatives, give a positive response to Heller's test, even in the absence of serum protein. Accordingly, a medium-sized dog was given 5 grams of thymol by mouth. The urine excreted during the succeeding twenty-four hours showed the familiar brownish-yellow color, which on standing gradually became black. Heller's test was positive, but, as the precipitate that was produced had the same color as the urine, differentiation was almost impossible. To overcome the difficulty, different metabolism derivatives of thymol,[8] e. g., thymosulphuric, thymohydrochinon sulphuric and thymoglycuronic acids were isolated from the urine in the form of their chlorine substitution products. A small quantity of each of these substances was then individually added to normal urine, which in turn was subjected to Heller's test. The treated urine in each case showed a positive reaction. Agitation of this urine with petroleum ether in the manner above indicated did not extract the compound of thymol with glycuronic acid. This fact is of some importance, for, while petroleum ether readily extracts thymol from urine to which it has been added as a preservative, it does not do so when this drug has been given internally and is excreted through the kidneys.

I may add that Robert's modification of Heller's test —consisting in the substitution of a mixture of one volume of concentrated nitric acid and two volumes of a saturated aqueous solution of magnesium sulphate for the concentrated nitric acid—produces a thymol ring in thymolized urine which is characterized by the absence of the color phenomena caused by the concentrated acid alone, and is therefore much more readily mistaken for an albumin ring. However, extraction with petroleum ether will guard against this error.

I am much indebted to Prof. William J. Gies for his valuable suggestions and active interest in this investigation.

252 Willis Avenue.

8. Blum, Ztschr. f. physiol. Chemie, xvi, p. 514.

SOME EXPERIENCES WITH THE OATMEAL DIET IN THE TREATMENT OF DIABETES MELLITUS

ALFRED C. CROFTAN, M.D.
CHICAGO

The feeding of diabetics with large quantities of a single carbohydrate (oatmeal, rice, potato, milk) has been practiced with occasional success for many years; when carefully controlled and when employed in properly selected cases this method is a useful and often indispensable adjuvant to the treatment; when applied promiscuously it is dangerous. Because it is not a routine measure applicable alike to all types of diabetes it has not become popular.

As a preliminary step the type of diabetes must be established. I have found the following clinical classification to be convenient and useful.

CLINICAL TYPES OF DIABETES

Type 1.—In cases of this type the sugar disappears within two days after complete withdrawal of carbohydrates; this type, of course, includes patients who retain a small tolerance, i. e., that fail to pass sugar even when 100 or 150 grams of white bread or its equivalent[1] are administered.

The cases of Type 1 that occur in very young and in very old people possess special clinical significance. In the young patients the outlook is always more serious and they almost invariably develop the severe type unless the greatest care is exercised. In the old patients, in whom the diabetes is usually associated with obesity, gouty manifestations or arteriosclerosis, the outlook, on the other hand, is especially favorable as far, at least, as the development of severe degrees of diabetes is concerned.

Type 2.—The sugar can not be made to disappear until the patients have been on a strict, that is, carbohydrate-free, diet for at least two to three weeks. Here three subgroups can readily be distinguished:

In Group 1 there occurs with the gradual reduction and final disappearance of the glycosuria a general improvement in the condition of the patient, an increase in weight, a reduction of the acetone bodies of the urine to the normal.

In Group 2 there is an initial loss of weight, a general feeling of malaise and weakness, and the acetone bodies are excreted in increased quantity. With the complete disappearance of the sugar, however, the weight again increases, the patients recover their sense of well-being and the acetone bodies are reduced to normal.

In Group 3, finally, the condition of the patient becomes aggravated at once and, while the sugar excretion may decrease or the glycosuria disappear altogether, the patients rapidly lose weight and strength and develop alarming degrees of acidosis with a correspondingly large excretion of acetone bodies. Such patients, too, often develop digestive disorders and in unfortunate cases relapse into coma if the strict diet is persisted in. It is clear that they form a transition to the third or severe type of diabetes.

Type 3.—The sugar does not disappear from the urine even if a carbohydrate-free diet is given for many weeks consecutively, showing that these individuals are unable to consume even that proportion of sugar which is generated within their own tissues from the disintegration of the body albumins. Reduction of the food albumins often causes a disappearance of the sugar in the urine, but resumption of the normal proteid ration promptly causes its reappearance. The patients of Type 3 usually excrete large quantities of acetone and its congeners and rapidly emaciate, even if the caloric intake is carried far above the normal limit.

TYPES SUITABLE FOR THE OATMEAL TREATMENT

The "Von Noorden oatmeal cure" is worse than useless in the mild cases of the first type, occurring in adults or in senile individuals. These patients respond to the ingestion of large quantities of oatmeal by an increased glycosuria and very often by severe digestive disturbances.

The method is also harmful in Groups 1 and 2 of the second type of diabetes. I have seen cases of medium

1. The carbohydrate contained in 100 gm. of white bread is approximately equivalent to the carbohydrate in: 120 gm. of rye or graham bread; 200 gm. of aleuronat or gluten bread; 70 gm. of zwieback; 80 gm. of chestnuts (peeled); 80 gm. of flour (wheat, rye, barley, buckwheat); 70 gm. of rice; 70 gm. of noodles or macaroni; 70 gm. of oatmeal; 120 gm. of dried peas, beans, lentils; 200 gm. of green peas; 360 gm. of new potatoes; 280 gm. of old potatoes, etc.

severity which would, in my judgment, have been converted into very mild cases with a high carbohydrate tolerance by judicious feeding, but which were converted by oatmeal feeding into severe types and remained so; it seems that in these cases the overtaxation of the carbohydrate metabolism produces irremediable and permanent damage.

In the juvenile cases of Type 1, as well as in adolescent cases of the severe Type 3, the method is distinctly useful; here brilliant results, not obtainable, I am convinced, by any other method of feeding, are occasionally observed.

Adults, in cases of the very severe type, do not respond so well to the oatmeal treatment. If certain precautions, to be presently specified, are observed, however, no harm can accrue from a trial. In view of the inefficacy of the ordinary methods of diabetic treatment in this type and in view of the occasional improvement derived from oatmeal feeding, the plan should at least be tried.

Whereas in juvenile patients, however, no valuable time should be wasted with preliminary attempts to modify the course of the glycosuria by the ordinary strict diet and the administration of the oatmeal diet should be begun as soon as possible after the discovery of glycosuria, in adults oatmeal feeding should be regarded as a last resort and should be employed only when all other means, after persistent trial, have been found to be inefficacious.

PRACTICAL POINTS IN OATMEAL FEEDING

The technic of the von Noorden oatmeal cure has been so often described in other places[2] that it is unnecessary to explain the method here. I have found it quite superfluous, even disadvantageous, to administer the oatmeal in the unpalatable and thoroughly distasteful form originally proposed by von Noorden. Two hundred and fifty grams of oatmeal, 250 grams of butter, half a dozen eggs and salt can be combined in many other ways than as a very fatty porridge or soup. In very small children the gruel method is probably the simplest, and they object to it less than do adolescents or adults. In older individuals it requires an immense amount of will-power to live for days on the oatmeal porridge given every few hours with nothing to relieve the monotony but a little black coffee or some claret, whiskey, or brandy and water.

It is much easier and safer to begin the oatmeal cure than to stop it. The change of diet in the beginning must be abrupt, i. e., nothing whatsoever must be given but the oatmeal mixture. It is unnecessary, as a preliminary step, to attempt reduction of the glycosuria by a strict diet, although as a rule the patients will have been on a strict diet before the oatmeal treatment is begun; this, in my experience, is detrimental rather than otherwise.

In patients reacting favorably to the oatmeal diet the resumption of a general diet or of a meat-fat-vegetable diet must be very gradual. For a long time, often months, after the exclusive oatmeal feeding has been stopped, oatmeal should still remain the only carbohydrate eaten, and other starchy pabulum should be very carefully administered. It is especially precarious to mix carbohydrates after an oatmeal course.

Animal proteids should always be resumed with care; for I have found that particularly those patients who respond well to the oatmeal treatment exhibit a marked intolerance for meat, fish and poultry; so that even in the most favorable cases, but especially in cases in which the sugar and acetone bodies did not disappear but were merely reduced, the addition of animal proteids is promptly followed by an increased glycosuria and an increased excretion of acetone bodies.

The oatmeal diet occasionally does harm, particularly if its administration is persisted in when improvement in glycosuria, polyuria, acetonuria, thirst and hunger and strength fails to appear within five days. It is a good rule, therefore, and a safe one, to give up the oatmeal attempt at the expiration of this period unless such improvement has become clearly manifest. In my earlier experience, as expressed elsewhere, I have seen a reduction in the tolerance for carbohydrates, quite alarming degrees of acetonuria and severe digestive disturbances appear if oatmeal feeding was persisted in for longer than five days in cases in which the patients did not respond favorably within this period.

As a precautionary measure against acidosis, from two to four teaspoonfuls a day of sodium bicarbonate, either alone or mixed with equal parts of magnesia usta, should be given throughout the oatmeal treatment. I also administer 10 grains of pancreas powder with one grain of sodium glycocholate four times a day during the period of exclusive oatmeal feeding. No laxative is ever needed, the oatmeal and the fat effectively promoting good bowel evacuations.

SUMMARY OF RESULTS IN CHILDREN

The most brilliant results are obtained in children, particularly if the oatmeal cure is administered as soon as possible after the diabetes is discovered. I have seen in the last five years three cases of diabetes in children (see below) within two or three weeks after the first symptoms of diabetes were discovered. And these three children, after a lapse of from three months to three and one-half years, are altogether well, one on a general diet, one on a partially restricted diet, one (the most recent one) on a diet still incorporating no other carbohydrate than oatmeal.

In cases of diabetes of longer duration children below 15 years, in my experience, do not fare so well. Of eleven children, with a diabetes of longer standing, varying in age from 7 to 14 years (whom I either treated myself or in whom I advised the oatmeal treatment) who were fed on the oatmeal diet as a last resort and who had been fed for periods of several months before with a strict diet, not one is even symptomatically well to-day. Seven of them have succumbed to coma, one to intercurrent tuberculosis, three are still alive, but none of them sugar-free.

SUMMARY OF RESULTS IN ADOLESCENTS AND ADULTS

In adolescents and adults the results have, on the whole, been favorable rather than otherwise. In so far as the mild cases of Type 1 (see above) and certain cases of Type 2 are excluded as altogether unsuitable from this summary, there remain only a limited number of severe, usually quite old, cases of diabetes to be considered.

2. von Noorden: Bemerkungen zur Pathologie und Therapie des Diabetes Mellitus, Wien. med. Presse, 1902, No. 40; Ueber Haferkuren bei schwerem Diabetes Mellitus, Berl. klin. Wchnschr., 1903, No. 36.

Croftan: Some Practical Points in the Dietetic Management of Diabetes, Therap. Gaz., April, 1906; Clinical Therapeutics, ed. 2, 1906, p. 129 ff.

Herrick, James B.: The Oatmeal Diet in the Treatment of Diabetes Mellitus, THE JOURNAL A. M. A., March 14, 1908, L, 861.

In no adolescent patient have I seen permanent cessation of the glycosuria in the sense, namely, that a general diet could safely be resumed. In a considerable number of the cases the oatmeal diet, however, produced a decidedly favorable effect, and when persisted in led to a complete disappearance of the sugar, without much acetonuria, a result that had been impossible to obtain by any other method of feeding; associated with these changes was often a marked gain in weight and strength and a disappearance of the most distressing general symptoms of severe diabetes and of certain of the complications (neuralgias, furunculosis, constipation, itching).

None of these patients maintained their improvement when abundant proteid feeding was resumed. In so far as continuous feeding with the oatmeal diet is impossible, and in so far as in several of the cases the oatmeal ceased to be so well tolerated after several weeks as at first, this improvement is only relative; nevertheless, it is an improvement, a much-to-be desired one, and one, in my judgment, not obtainable by any other means.

Even when the oatmeal diet was administered within two or three weeks after the discovery of the diabetes in adults or adolescents suffering from types suitable for this treatment, no such good results as those occasionally obtained in children under similar conditions have ever, in my experience, been observed.

TABLE 1.—CASE 1

Date.	Total Urination.	Spec. Grav.	Sugar. %	Sugar. Gm.	FeCl Reaction.	Acetone.	Body Weight. Lbs.	Body Weight. Oz.	Diet.
May 12, 1904.....	4400	1038	1.54	68	+	4.1	59	4	Strict diet.
May 13, 1904.....	4100	1040	1.17	48	+	3.8	57	6	Strict diet.
May 14, 1904.....	3600	1018	0.65	23.4	+	2.1	56	4	Oatmeal diet.
May 15, 1904.....	3800	1015	0.305	11.6	+	0.8	56	8	Oatmeal diet.
May 16, 1900.....	1480	1009	0.14	2.1	+	0.22	57	0	Oatmeal diet.
May 17, 1904.....	1620	1014	0.27	0.4	+	0.06	56	9	Oatmeal diet.
May 18, 1904.....	720	1005	0.0	0.0	+	0.07	58	1	Oatmeal diet.
May 19, 1904.....	2100	1010	0.0	0.0	+	0.12	58	8	Oatmeal diet.
May 20, 1904.....	1600	1014	0.0	0.0	0	0.11	59	8	Oatmeal, "allowed vegetables."
May 21, 1904.....	1620	1012	0.0	0.0	+	0.09	60	4	Oatmeal, "allowed vegetables."
June 2, 1904.....	1480	1016	0.0	0.0	0	0.08	62	1	Oatmeal, "allowed vegetables."
June 15, 1904.....	1540	1014	0.0	0.0	0	0.10	63	4	A little meat, fish, poultry, "allowed vegetables," oatmeal.
July 20, 1904.....	1220	1020	0.0	0.0	0	0.03	64	4	
August 14, 1904.....	1420	1018	0.0	0.0	0	0.11	67	3	
September 10, 1904....	1580	1018	0.0	0.0	0	0.12	68	1	
December 20, 1905....	1600	1018	0.0	0.0	0	0.02	76	4	General diet, with exclusion only of sugar and sweets.

TABLE 2.—CASE 3

Date.	Total Urination.	Spec. Grav.	Sugar. %	Sugar. Gm.	FeCl Reaction.	Acetone.	Body Weight. Lbs.	Body Weight. Oz.	Diet.
October 18, 1908.....	....	1030	2.5	....	+	1.4	64	8	Strict diabetic diet.
October 19, 1908.....	1410	1030	3.2	45	+	2.02	66	0	Strict diabetic diet.
October 20, 1908.....	2610	1030	2.5	65	+	1.7	66	6	Strict diabetic diet.
October 21, 1908.....	2040	1020	2.0	40.8	+	1.2	66	0	Oatmeal diet.
October 22, 1908.....	1010	1015	1.0	10.1	+	0.7	65	8	Oatmeal diet.
October 23, 1908.....	690	1010	0.4	2.7	+	0.21	65	7	Oatmeal diet.
October 24, 1908.....	1050	1010	0.0	0.0	+	0.14	65	7	Oatmeal diet.
October 25, 1909.....	1350	1005	0.0	0.0	+	0.19	65	9	Oatmeal diet.
October 26, 1908.....	1260	1013	0.0	0.0	+	...	65	10	Oatmeal diet.
October 27, 1908.....	2520	1009	0.0	0.0	+	0.31	67	0	Oatmeal diet.
October 28, 1908.....	2520	1007	0.0	0.0	+	0.02	66	4	Oatmeal diet.
October 29, 1908.....	1440	1010	0.0	0.0	+	0.02	65	8	Oatmeal diet.
October 30, 1908.....	1470	1010	0.0	0.0	+	0.07	67	1	Oatmeal diet.
October 31, 1908.....	2900	1010	0.0	0.0	0	0.03	68	5	Oatmeal diet.
November 1, 1908.....	3150	1010	0.0	0.0	0	0.11	67	8	Oatmeal diet plus 1 lb. steak.
November 2, 1908.....	2250	1015	0.95	21.37	0	0.14	67	8	Oatmeal diet.
November 3, 1908.....	3060	1010	0.16	4.89	+	0.42	68	0	Oatmeal diet.
November 4, 1908.....	2010	1011	0.0	0.0	+	0.10	68	2	Oatmeal diet.
November 5, 1908.....	1920	1009	0.0	0.0	+	0.06	68	0	Oatmeal diet.
November 6, 1908.....	2160	1010	0.0	0.0	+	0.06	67	4	Oatmeal diet.
November 7, 1908.....	2010	1012	0.0	0.0	+	...	67	8	"Allowed vegetables."
November 9, 1908.....	1600	1014	0.0	0.0	+	0.02	68	1	Left hospital.
November 13, 1908....	1820	1012	0.0	0.0	0	0.01	68	0	Oatmeal and vegetables.
November 20, 1908....	1490	1016	0.0	0.0	+	0.02	70	1	Oatmeal and vegetables.
November 27, 1908....	1240	1016	0.0	0.0	0	0.11	71	0	Oatmeal and vegetables.
December 5, 1908.....	1400	1020	0.0	0.0	0	0.09	71	8	100 gm. oatmeal, fat, vegetables and a little meat, fish or poultry.
December 17, 1908....	1240	1016	0.0	0.0	0	0.03	73	2	
December 23, 1908....	1640	1018	0.0	0.0	0	0.12	73	8	
December 29, 1908....	1520	1020	0.0	0.0	0	0.08	74	1	
January 16, 1909.....	1580	1019	0.0	0.0	0	0.14	77	8	50 gm. oatmeal; no other starchy food; vegetables, a little meat, fish, poultry, plenty of fat and a little alcohol each day

REPORTS OF THREE CASES OF DIABETES IN CHILDREN

CASE 1.—Mary P., referred by Dr. W. B. Irish of Pittsburg, aged 8 years 6 months. Without any premonitory symptoms the child developed lassitude and "crankiness," with great hunger, thirst and polyuria, was taken to her physician on the third day after the onset of these symptoms and the urine found to contain abundant sugar, diacetic acid and acetone. Twenty-four hours' quantity passed on the day following was 4,200 c.c. I saw the child four days after the discovery of the diabetes, i. e., seven days after the appearance of the first symptoms. For four days a strict diet had been followed. Urine analysis of the quantity collected from the seventh to eighth days: Quantity, 4,400 c.c.; specific gravity, 1,038; sugar, 68 grams; ferric chlorid reaction positive; acetone, 4.1 grams. Weight, 59 pounds 4 ounces (loss of 2 pounds 4 ounces from the third to the seventh day). The oatmeal diet was at once administered to the exclusion of everything else, and the accompanying table shows the sequence of events. I heard from the child's parents about a year and a half later; she had then been on a general diet for several months, only sweets and candies being excluded. A urine sample revealed normal conditions. The family has since then lived in Europe and I have lost track of the case.

CASE 2.—This case was also seen by Dr. J. B. Herrick, who administered the oatmeal diet; he has published a report of the case *in extenso* in his excellent article[2] on "The Oatmeal Diet in the Treatment of Diabetes Mellitus," and I abstract the essential parts of his report as follows:

Elizabeth B., aged 10, referred by her father, Dr. B. of Iowa, suffered slight indisposition with a little temperature, some epigastric tenderness and a faint icterus. Six weeks later she became thirsty. Urine examination at this time: 4,000 c.c.; specific gravity, 1,040, with a large amount of sugar. The child was brought to Dr. Herrick Dec. 27, 1906, and the oatmeal diet begun at once. Jan. 2, 1907, the urine for twenty-four hours was 1,000 c.c. and sugar-free. The sugar entirely disappeared after three days of the oatmeal diet.

On January 14 it was determined that no sugar had been present from January 1 to June 1; then for three days there was a little sugar, which again promptly disappeared on the oatmeal diet. The patient weighed 70 pounds, felt strong and was attending school. Daily examination of the urine had been made for six months and Nov. 20, 1907, the father reported that, barring the occasional appearance of a little sugar in the tests that were made every day, the child was apparently well, the sugar never being present for more than three days at any time since ten months ago. "She is eating gluten bread twice a day and buckwheat cakes for breakfast; fruit and nuts as she cares for them; meat and eggs, all we can induce her to take; no milk except cream in weak tea or weak coffee."

Dr. Herrick expresses himself as follows in regard to the case: "This result is, it seems to me, remarkable. It is better than any other obtained by me in the case of diabetes in a child on other diets. One can not say that recovery has occurred; one may join with the father in hoping for it. But an amelioration of symptoms with such a marked general improvement would stamp the treatment that was efficacious in bringing about such an effect as a most valuable one.

"I am sure Dr. Croftan, who also saw this patient, will agree with me in ascribing to the oatmeal treatment the sudden checking of the onward progress of the disease; and this must be one of the cases that has induced him to say:[3] '. . . No case of juvenile or adolescent diabetes should be deprived of the benefits of the oatmeal cure.'"

CASE 3.—Jennie M., aged 10 years, 1 month, was referred by Dr. A. Schirmer, Chicago. Sugar was first discovered Oct. 8, 1908, following symptoms of general weakness, peevishness, loss of appetite, great thirst for two weeks preceding first visit of Dr. Schirmer. From October 8 to October 18 strict diabetic diet was given. On this régime the child continued to lose weight, grew weaker, polyuria increased and urine remained "loaded with sugar."

She was referred to me Oct. 18, 1908, and was sent to Michael Reese Hospital. Strict diabetic diet for forty-eight hours. Sugar excretion during the first twenty-four hours was 45 grams; during the second twenty-four hours, 65 grams. (For other urinary findings, see Table 2.) October 21 the patient was put on oatmeal diet. The sugar excretion on four succeeding days was as follows: 40.8 grams, 11.1 grams, 2.7 grams, 0 grams. Under exclusive oatmeal diet for eight days the urine remained sugar-free. The addition of one pound of beefsteak to the diet caused the reappearance of sugar, 21.37 grams. Strict oatmeal diet caused the urine to become sugar-free again in two days. Several vegetables and a little fish, poultry and beef were now added to the diet, the oatmeal at the same time being reduced. The urine has remained sugar-free ever since. The acetone bodies have been reduced to normal figures. The child to-day (Jan. 16, 1909) weighs 77 pounds 8 ounces as against 64 pounds 8 ounces three months ago, feels well and strong on a diet containing about 50 grams of oatmeal, about 200 grams of meat, fish or poultry, 25 grams of bread, 25 grams potato, and other "allowed" vegetables *ad libitum*.

100 State Street.

3. Clinical Therapeutics, ed. 2, p. 130.

Antibodies in Persons with Hydatid Cysts.—The *Revista de la Sociedad Med. Argentina*, xvi, 624, 1908, contains an article by Apphatie and Lorentz reporting the discovery of specific antibodies in the blood serum of persons with hydatid cysts. Their experience indicates that the presence of these antibodies confirms or excludes hydatid affections, and that their absence excludes hydatid disease. They applied the hemolytic test with the ordinary technic, following the directions of Bordet and Gengou. The reaction was positive in everyone of the twenty-five cases examined, while the findings were equally constantly negative in 117 control individuals.

INDURATIVE HEADACHE

(SCHWIELENKOPFSCHMERZ) WITH REPORT OF THREE CASES *

N. S. YAWGER, M.D.

Assistant Physician in the Dispensary for Nervous Diseases in the Hospital of the University of Pennsylvania

DARBY, PA.

Indurative headache is of organic origin, chronic and usually paroxysmal, occurring in various parts of the head, and due to infiltrations or thickenings at various points, chiefly in the muscles of the head and neck. From the so-called cases cephalalgia, cephalodynia, migraine, hemicrania, cranial neuralgia and neuritis, many can be separated as belonging to this class.

A search made through works of neurology and monographs on headache by American physicians found little or no mention of headache due to these indurations. The subject seems neglected, except for the statement that headache is sometimes rheumatic, lithemic, or gouty in origin. The condition is ably treated, however, by Professor Edinger[1] and by Professor Norström,[2] of Stockholm, who spent some time in New York and while there wrote on this subject. The significance of this condition has been recognized for years by physicians abroad, notably by the Swedes and Germans.[3] In writing on headache due to organic disease, Edinger makes the astonishing statement that, though indurative headache is almost unknown, it is probably the most frequent form of this disease.

CAUSE

In studying the cause of this condition we find that at the insertions or within the bodies of the muscles of the head and neck there appears a thickening which comes and goes at first and later becomes chronic, and which gives rise to stimulation or irritation of the sensory nerve fibers, thereby causing pain. Given, then, this chronic condition, a paroxysm may be brought on by emotional disturbance, physical or mental fatigue, sudden exposure to cold, as a chilling draft, insufficient drying after washing the hair, a stay in badly ventilated places, as the theater, by the approach of damp and chilly weather or storms. As. Dr. Mitchell[4] wrote, "It is only required to come within the outer limits of storm conditions. The sky may be cloudless and the rain or cloud areas two or three hundred miles away and yet the sufferer be within the area of barometric depression. It was not needed that there be rain." The condition varies with seasons, being least common in summer and most frequent in fall and spring.

It is not the purpose of this paper to enter into the consideration of the pathologic chemistry of these swellings, for after much investigation the chemistry of gout, lithemia, uricacidemia and allied conditions is still far from being satisfactorily defined. These infiltrations or thickenings actually exist and give rise to a chronic myositis at the points of their lodgment. They are found present in three stages: 1. A swelling. This

* From the Department of Neurology of the University of Pennsylvania.

1. Edinger: In Diseases of the Nervous System, translated from Die Deutsche Klinik, Appleton & Co., New York, 1908.

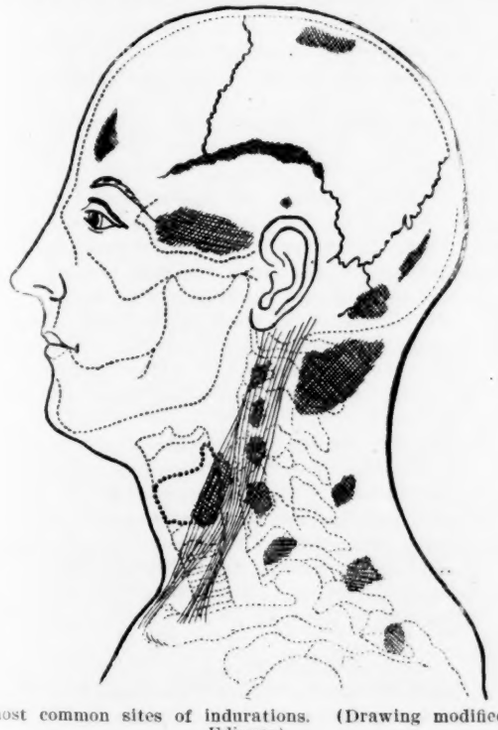
2. Norström: Der chronische Kopfschmerz und seine Behandlung mit Massage. Leipsic, 1903; Le migraine; traitement par le massage, Paris, 1904, Baillière & Fils; New York Med. Jour., 1905, lxxxii.

3. Reidel: Der Kopfschmerz und seine physikalische Behandlung, Berl. klin. Wchnschr., 1907, xliv, 338; Kleen: Handbook of Massage, P. Blakiston's Son & Co., Philadelphia, 1892.

4. Mitchell: Relation of Neuralgic Headache to Storms, Tr. Coll. Phys. Philadelphia, 1903, xxv, 71.

is of a soft, yielding consistency and is frequently present in the bodies of the muscles, where a puffiness is often noticed. 2. A slightly elastic resistance offered to the touch as though some organization had taken place. 3. Induration. There is an absence of elasticity and organization has advanced to the stage at which a substance of cartilaginous consistency presents itself to the examiner. The older these thickenings are the firmer they have become and the more resistance they offer to treatment.

These indurations appear again and again for some time before becoming chronic, and they are by no means confined to the head and neck. Other haunts of this insidious invader are the points where the gracilis, sartorius and semitendinosus muscles cross the inner side of the knee, at the inner and outer aspects of the ankle, at the insertions of the pectoralis major and latissimus dorsi into the humerus, the muscles of the abdominal wall where there are occasionally found little nodules which feel like small grains of shot, and which give rise to sharp pain on slight movement. In one obscure case



The most common sites of indurations. (Drawing modified from Edinger).

of this kind the patient was suspected of having appendicitis. So-called cases of sciatica have ceased after the removal of these infiltrations around the gluteal and sacral regions. Deafness has been produced by the pressure of these swellings on the Eustachian tubes, and hearing has been restored after appropriate treatment. By far the most frequent site of these accumulations is in the muscles of the head and neck, and I believe that this is due to the fact that this is a much exposed part of the body. These indurations are probably the chief cause of the so-called rheumatic throat, but I do not believe any of these conditions are due to gout, for a paroxysm of gout, such as frequently involves the metatarsophalangeal articulation of the great toe, gives rise to marked redness and fever. An attack of lumbago does, however, present a strikingly similar picture, inasmuch as it frequently follows exposure to dampness or cold. After a number of acute attacks it may become chronic, offering considerable resistance to palpation, and it may give rise to a dull ache or sharp pain. It is relieved by local pressure. There is no redness and fever present, and it will yield to the same treatment employed in the removal of these indurations.

SYMPTOMS

The symptoms are of two groups—those of the chronic condition and those of the paroxysm. In the development of these pains, they are at first slight and infrequent; gradually they occur more often, are of greater severity and of longer duration. Sometimes they are of the nature of a dull ache and almost constant; again they may be sharp in character. Local pressure often affords relief, but if an actual neuritis is present the suffering will be intensified by pressure. These patients are very susceptible to colds, subject to depression of spirits and mental torpor and frequently there are associated symptoms in other parts of the body, some of which are gastrointestinal disturbance, toxemic in character, painful spasms of the calf muscles, an occasional attack of nephritic colic, myalgia in many different parts of the body, and the oral cavity may give manifestations in the form of hypersensitiveness of the teeth and pyorrhea alveolaris. It is probable that all these local conditions are but different manifestations of the same general disturbance of nutrition. Many of these cases are neurasthenic and it seems likely that an excess of uric acid or an allied substance is concerned in the production of this condition. Before an attack of headache the enlargements become swollen and sensitive; the pain which develops a little later may be mild or agonizing. It occurs in various parts of the head, depending on the location of the enlargements; it is usually over the site of these areas, but there may be radiation of the pain. Fever and redness are absent.

All cases of headache should be examined by forcible flexions and twistings of the neck, which may bring out intense pain at the insertions or along the bodies of the neck muscles. The exploration may be made advantageously during a paroxysm, for at such a time the swellings are more apparent and their sensitiveness greater, so that points which might otherwise be overlooked are then easily detected. The head and neck should be thoroughly palpated in the following manner:

Moderately firm pressure should be employed over the entire scalp, where thickenings, irregularities, indurations and nodules may be found. These parts may be only slightly sensitive or they may be exceedingly so. The same condition is then sought at the insertions of the trapezius, scaleni, splenii and sternomastoid muscles. Hypersensitive points are often found around the base of the skull from one mastoid process to the other, on the spinous processes of the cervical vertebræ, and particularly on the transverse processes of the upper cervical vertebræ. The supraorbital region is often involved and the temporal muscle may be the seat of marked thickening. Any portion of the scalp may be thickened or nodular. Chronic glandular enlargement due to irritation produced by proximity to these accumulations is sometimes present and congestive headache may be produced by the circulation being retarded through pressure from these swellings on the veins. This ceases after the dispersement of the enlargements.

DIAGNOSIS

In the diagnosis of a severe paroxysm with agonizing pain in the head and back of the neck, this condition

may be mistaken for meningitis, but here fever is present and the indurations and hypersensitiveness absent. In migraine there is frequently a sensitive aura, painful and hypersensitive areas are absent, while nausea and vomiting are present. Hereditary migraine begins in early youth; indurative headache appears in later life, and, finally, migraine is unrelieved by massage. Indurative headache may, of course, develop in persons subject to migrain. Neuralgia and neuritis may result from these thickenings. Cases of hemicrania frequently belong to this group of headaches.

TREATMENT

Under efficient treatment, which will take from one to three months, these enlargements can usually be removed. There are a few cases of induration of such marked cartilaginous consistency and of such long standing that only amelioration can be effected.

Persons in whom there is a tendency to these thickenings should take active exercise in the open air, drink water freely between meals, avoid overfatigue from excessive physical or mental activity and emotional excitement. If a relationship between this condition and uric acid is subsequently proved, the diet should be low in the percentage of purins; it should be nutritious, of easy assimilation and not too abundant; alkaline waters are useful; tea and coffee should be used only sparingly, and alcoholic beverages should be avoided. Internal medication does but little good unless a reconstructive tonic is indicated by general debility. Potassium iodid may give some relief in advanced cases. For a severe acute attack a brisk purgative should be given, a warm bath, hot dry applications to the affected part, and repeated large doses of sodium salicylate, aspirin (acetylsalicylic acid) or salophen (acetylparamidophenol salicylate). The removal of the thickenings will require from one to three months, and the measures given, in the order of their efficiency, are massage, vibration and galvanism. The galvanic current may possibly be made useful, the anode being placed over the affected area and the cathode at an indifferent point. Vibration by means of the electric vibrator helps to remove the thickenings and is conducive to more rapid absorption, but should not be used about the head in cases of arteriosclerosis. The most effectual means of removing these enlargements is without doubt massage. This is at first painful, but after a few treatments the hypersensitiveness disappears. During these treatments a local application of an ointment containing methyl salicylate and capsicum is of some benefit, the former drug acting by absorption and the latter doing good as a counter-irritant. Massage sometimes causes enlargement and tenderness of the lymph glands which receive lymph from the site of the swellings, but this soon subsides.

In all these cases the bowels should be kept active and it is not enough that they be opened daily; they must be emptied; this may be accomplished by the generous use of the laxative mineral waters. The treatment is complete when the swellings have disappeared and tenderness no longer exists.

Few patients are more grateful than those relieved of the sufferings from these agonizing and obstinate headaches.

REPORT OF CASES

I report three cases which, as far as I am able to determine, are the first reported by an American physician. The first history which I give is not from a case of my own, but from a patient whom it was my privilege to examine some weeks ago while he was under treatment.

CASE 1.—*History.*—The patient was a lawyer, aged 40, who had had headaches since boyhood. For the last three years they had become very severe and had occurred as often as once or twice a week with a duration of one or two days. They were frequently brought on by work in the court-room and were so incapacitating that the patient thought at times he should have to relinquish the practice of law. He did not remember that they were affected by damp, wet weather, but recalled that while traveling in England they were very annoying and that he was free from them during a stay in Switzerland. The headaches were largely confined to the two temporal regions.

Examination.—The patient appeared anemic, poorly nourished, and of a color which suggested a sluggish liver. Cartilage-like thickenings were found on the transverse processes of the upper cervical vertebræ, marked enlargements offering considerable resistance at the insertions of the muscles around the base of the skull between the mastoid processes. Swellings were present in the sternomastoid muscles from the level of the thyroid cartilage to their clavicular attachments. Both temporal muscles were involved; they were thickened and very sensitive and it was to these areas that the headaches were largely limited.

Course of Disease.—The patient has now been under treatment every other day for two months, and during this time has only had four attacks, all of which were mild and of short duration. His general appearance has improved; there is an increase in weight and his work is now done without fatigue.

CASE 2.—*History.*—The patient, aged 63, was formerly owner of a business college. He had suffered for years from pain in the back of the head and neck. He said that he had had several attacks of renal colic and frequently noticed a brick-dust sediment in his urine. He was very susceptible to cold and was much affected by damp, chilly weather. He was troubled with stiffness in the back of the neck, where he said he did not have proper use of his muscles. Because of poor health his business was disposed of a few years ago and he then spent some months in California, after which he was somewhat improved.

Examination.—The patient was rather poorly nourished and anemic. Forcible flexion and twisting of the neck caused intense pain in the back of that region. Areas offering marked resistance and sensitiveness were found over the transverse processes of the upper cervical vertebræ; the occipital portion of the occipitofrontalis muscle was thickened and painful, and there were two enlargements which were very painful on pressure on either side of the spine just below the seventh cervical vertebra.

CASE 3.—I have myself suffered from this condition. I was free from headaches until 18 years of age, and since then have really suffered only during the last six years. A dull ache was often present but severe attacks have not occurred oftener than two or three times a month and have been most frequent and painful in the fall. Bad weather has often brought on a headache, as has my being in crowded and poorly ventilated rooms. Occasionally indigestion would be followed by an attack, but there was never any accompanying nausea or vomiting. I have frequently been troubled with a stiff neck and different portions of the trapezius muscle have often been painful on slight movement. My headaches were on the left side and were mainly limited to the temporal and supraorbital regions. For a long time I had noticed that with a headache the left supraorbital region was tender and swollen as well as painful. The left temporal region was always swollen and tender from the zygomatic arch to the temporal ridge. In the course of an attack, this swelling would increase so that the left arm of my glasses would cut a distinct furrow where it crossed this area. Two small patches of exceeding tenderness were present in the auricularis superior muscles just above the ears. During the paroxysms the headaches were constant, severe, and very depressing. They lasted from a few hours to two days and twice I was confined to my bed. Pressure over these areas always gave some relief. Local enlargements were also present

causing distinct puffiness of the sternomastoid muscles on a level with the thyroid cartilage. Quick forcible flexion would cause pain at the cephalic insertions of the muscles along the superior curved line of the occipital bone. This line at the base of the scalp was always sensitive to pressure but there was never an ache in this portion of my head. It was not until last summer that I determined the cause of these headaches, since when, through massage and vibration, the swellings and sensitive areas have disappeared, and the pain has ceased.

THE VEINS IN THROMBOANGIITIS OBLITERANS

WITH PARTICULAR REFERENCE TO ARTERIOVENOUS ANASTOMOSIS AS A CURE FOR THE CONDITION

LEO BUERGER, M.D.

Assistant Adjunct Surgeon and Associate in Surgical Pathology, Mount Sinai Hospital
NEW YORK

In a paper read before the New York Pathological Society in March of last year, and then in a communication made to the American Association of Physicians in May, I proposed the term "thromboangiitis obliterans of the lower extremities" to designate a distinct group of cases formerly included by the Germans under the names endarteritis obliterans and *Spontan-Gangrän*. With the tremendous influx of Polish and Russian Jews into this country, we are now more than ever brought face to face with the perplexing question as to what can be done for these unfortunate patients. During the past two years I have seen more than 55 cases, have been able to collect clinical data on 44 of these, and have made pathologic studies on the vessels and nerves from 20 amputated limbs.

The history of the advent and development of the symptoms is very much the same in all the cases. Beginning in many instances with indefinite pains in the sole of one foot, in the ankle or in the toes, the patients soon notice that they are disturbed in their walk by the sudden onset of cramp-like sensations in the calf or elsewhere in the leg. These feelings make them take frequent rests, often inducing them to investigate the condition of their limbs. Some of them take off their shoes and rub the parts in the hope of either dispelling the pain or of getting rid of uncomfortable numbness in the toes and foot. Others say that the feet become cold and numb when the temperature is low and the weather is inclement.

After the lapse of weeks, months or even years, evidences of trophic disturbance make their appearance. After the cutting of a hang-nail, or without apparent cause, an abraded spot or a hemorrhagic bleb or even a dead dry patch of skin develops near the tip of one of the toes or under a nail. Now the local pain becomes excruciating during night as well as day so that many of the sufferers beg for the amputation of the affected part.

It is during the first attack of trophic disorder that the physician usually notices another characteristic symptom, namely, a peculiar blush of the toes and fore part of the foot extending to the ankle or slightly above when the limb is in a pendent position. When the limb hangs down the affected toe soon turns color; it assumes a bright red hue which is seen to pass to the other toes and then up the back of the foot for a variable distance, fading off toward the ankle or lower part of the leg. The elevated extremity, on the contrary, rapidly becomes blanched and the ischemia may persist even in the horizontal plane. Sometimes the superficial ulcer will heal under conservative treatment and the patient will either recover perfectly or his symptoms will become chronic. If we examine his limb in this period, we see the scars pointing to previous trouble; the dorsalis pedis and the posterior tibial artery usually fail to pulsate, and ischemia in the elevated position and redness or "erythromelia" (if I may be permitted to use the word) in the pendent position are regularly elicited. Sooner or later, however, be it in the extremity first affected or in the limb not yet diseased, an ulcer will give way to dry gangrene and amputation will be the issue.

Because of the striking condition of redness in the dependent position, and because of the increase of local pain when the limb is hanging down, a number of clinicians have been wont to diagnosticate "erythromelalgia" in these patients. Some cases have been regarded as examples of Raynaud's disease, because in them the symptoms of ischemia and cyanosis of the parts were prominent features. It is not my purpose to enter into a discussion on the differential diagnosis of these states, but I wish merely to point out that, although resembling erythromelalgia and Raynaud's disease in a number of symptoms, the clinical picture of thromboangiitis obliterans, as we see it, is so characteristic and definite that an attempt should be made to put it into a separate class.

If we keep in mind the pathologic lesions that belong to the vessels in this disease, we shall not hesitate long in concluding that unless something can be done to interrupt the rapidly progressing obliterating thrombosis, at its very inception, medical treatment can at best but alleviate some of the distressing symptoms. For the sake of clearness, let me briefly summarize the pathologic changes which I have described elsewhere.[1]

Studies of the vessels in the amputated limbs show the following: Most of the larger arteries and veins are obliterated over a large extent of their course. All stages in the occlusive change may occur in the various vessels of an extremity or in the same vessel in different parts of its course. The occlusion of the vessels is effected by red obturating thrombi; these become organized, vascularized and canalized. Recent red thrombosis may involve large portions of arteries or veins and is not secondary to the gangrenous process. It occurs even when no gangrene is present.

In short, we are dealing with vascular lesions of considerable extent, apparently initiated by the formation of occlusive thrombi, chiefly in arteries but not confined to these, followed by organization or healing, with an attempt at the production of sufficient collateral circulation.

When the patients consult us the lesions are usually profound. The absence of pulsation in the dorsalis pedis and posterior tibial arteries points to occlusion not only of these vessels but also to involvement of the plantars and possibly also to the closure of veins as well. Little wonder then, that our medical, mechanical and electrical treatments and radiotherapy and thermotherapy have done practically nothing for these patients. Medicines, including potassium iodid, mercury, fibrolysin, thiosinamin, nitroglycerin, are of no avail; light therapy, hot-air baths—all of these have been tried with but a very temporary and slight amount of relief from

1. Am. Jour. Med. Sc., October, 1908.

the most disturbing of the symptoms. I have purposely included mercury, since I have reason to doubt the statements of a certain number of observers who assert that injections of this drug have caused a cure in these cases. Quite a number of such cured patients have later fallen into my hands during exacerbation of their malady, and I have done the Gritti amputation on two patients who had been considered well after antiluetic régime.

So, recognizing the futility of the employment of ordinary measures in the therapy of thromboangiitis obliterans, it seems incumbent on us to try those means that still give promise of success in this disease. The attempt to divert the arterial stream from more or less closed and diseased channels into patent veins has been successfully carried out both experimentally in the lower animals and clinically in man. As far as I know, the operation of arteriovenous anastomosis has been done four times for the condition under discussion with a successful result in but one case. In looking over the reports of these cases it occurred to me that it would not be amiss to record the results of my investigations on the condition of the veins in thromboangiitis obliterans. For it is evident that any attempt to throw the arterial blood into veins which are diseased and closed must result disastrously for the patient. And it is just this particular fact that has been overlooked by those surgeons who have suggested anastomosis, namely, that the veins are very frequently and rather extensively obliterated in thromboangiitis obliterans. It shall be my purpose, then, first, to outline briefly the state of the venous channels as they were found in nineteen amputated limbs; second, to discuss the probable condition of the vessels in certain cases in which no pathologic studies could be made; and, third, to indicate in what direction our clinical studies should lead us if we wish to be able to decide rationally when the operation of arteriovenous anastomosis should be performed.

Before entering on my first theme it may be well to indicate in a few words what has already been accomplished by arteriovenous suture in the disease under discussion. In 1907 Lilienthal[2] did an end-to-end anastomosis between the femoral artery and femoral vein, but his patient died thirty hours after operation. The cause of death was not known.

Wieting of Constantinople, in a paper on the operative treatment of "angiosclerotic gangrene," reports a successful case in which he intubated the femoral artery below the origin of the profunda, into the femoral vein below the termination of the saphenous. The saphenous vein, he says, carries the venous blood back into the proper venous channel and the femoral vein distributes arterial blood, the profunda being left to act as a collateral. Whereas the color of the foot was livid in the horizontal position, and cadaveric when raised just before the operation, the completion of the angiorrhaphy was followed by reddening of the toes and a distinct improvement in the patient's subjective symptoms. The coldness gave way to a feeling of warmth, and the pains and paresthesia are said to have disappeared at once. When seen two months after the operation (March 7, 1908) the foot was warm and there were no symptoms.

Wieting also gives a few incomplete data in reference to a third case in which the anastomosis was done in the popliteal region but with failure because of thrombosis.

2. Ann. Surg., 1907, xlv, 1.

Finally, F. B. Lund[3] reports a case of "obliterative endarteritis" temporarily improved by arteriovenous anastomosis. Gangrene, which was imminent before operation, soon became progressive, however, and amputation had to be performed. In a personal communication Dr. Lund tells me that the case was probably of the type which I call thromboangiitis obliterans, as shown by his recent pathologic studies of the vessels.

Directing our attention now to the lesions of the veins, we may consider these under two separate heads: the changes in the deep veins, especially the larger solitary veins and venæ comites, and the changes in the superficial veins. Both systems are of the utmost importance when arteriovenous anastomosis is done, the one for the arterial, the other for the return venous circulation. Although my study of the deep veins is fairly complete, having been based on the findings at autopsy of the amputated limbs, I am unable to give as extensive and anatomic account of the superficial vessels. For, strangely enough, these were more frequently diseased in those cases in which amputation has not as yet been necessary, and my data have been collected mostly from clinical observation and from the study of excised pieces.

The same pathologic changes that I have described elsewhere[4] as being so characteristic for the arteries occur also in the veins. Thus we meet with various types of occlusion depending in the main on the age of the obturating process. In Figure 1 is seen an example of very recent closure of a vein by a red thrombus, which has become adherent at one point. A more usual type of early thrombosis is exemplified in Figure 2, where a segment of a large vein is occluded by a mixed clot. This shows lamellated fibrinous masses in its center and a peripheral zone of organization bordering on the intima. In this zone three so-called "miliary foci" containing giant cells can be readily detected. A still older stage in which organization is complete and in which the lumen of the vein is filled with connective tissue, small capillaries and blood pigment, is shown in Figure 3. Later in the history of the case, when by virtue of the attempts to produce efficient collateral circulation, the small canalizing capillaries have widened, and the obturating connective tissue has ripened into sclerotic fibrous masses, we see the development of those pictures which have been so frequently mistaken for an "endarteritis obliterans." In Figure 4 such an old type is depicted.

In the veins, too, as well as in the arteries, the thrombosis seems to take place in attacks, for we not uncommonly encounter various stages of the process in the two venæ comites following an artery. A reference to Figure 5 will clearly illustrate this point. The posterior tibial artery and one vein have been obliterated for a long time, judging from the nature of the obturating tissue. The other accompanying vein shows very recent blockage, and a small additional satellite illustrates an intermediate type of thrombus organization. And, finally, in Figure 6 a portion of a vein is seen, in the canalizing or daughter vessels of which the same thrombotic process has recently occurred. This is shown by the foci of giant cells and fibrin and the marked cellular infiltration evoked by the thrombosis.

3. Boston Med. and Surg. Jour., 1908, p. 683. I may also refer to Hubbard's three cases, Ann. Surg., December, 1908, which, however, do not fit in here, since the gangrene was of the senile arteriosclerotic type.

4. Am. Jour. Med. Sc., October, 1908.

I do not wish to go deeply into the minutiæ of the histologic changes, and have referred only to those features which seem of value in elucidating the nature of the process. For, from the standpoint of surgical intervention, we are more interested in determining the extent of venous involvement in the various cases than in the manner in which occlusion is brought about.

Reviewing the pathologic notes on nineteen amputated limbs, we find that, although the arteries were more or less affected in every case, obliteration of deep veins occurred in but seven of these, and closure of a large portion of the internal saphenous took place in one case. If we analyze these cases we learn that the thrombotic process in six of them concerned so many and such a large part of the venous channels that these certainly could not be regarded as possessing any advantages over the arteries for the requirements of an adequate circulation. In the table here appended I shall attempt to make this point clear.

Referring to the first seven cases in the table, we find that either one or both venæ comites of the posterior tibial artery were obliterated in every instance. Closure of the anterior tibial veins was less frequent, but the important external plantars were occluded in four out of the five cases in which they could be examined. Wherever I have indicated occlusion, a fairly large part or the whole course of the vessel showed the lesion. Without entering now into a discussion as to the theoretical requirements of the proposed new circulatory route, it is apparent that in six of the seven cases the existing venous channels were entirely inadequate.

What were conditions in the twelve cases in which the deep veins proved to be patent? Here, at least, the *sine qua non* for success in the establishment of an arteriovenous anastomosis, namely, wide and open efferent venous trunks, was present. Whether or not the other essential factors, soon to be discussed, obtained we shall determine in the analysis of the clinical pictures.

Having established the fact that the performance of vascular anastomosis could be rationally entertained in at least twelve out of nineteen patients, we must still answer the following questions: First, are there any other conditions that must be fulfilled before we decide on the procedure? Second, what information in regard to the state of the arteries and veins can we gain from our clinical studies

I have already alluded to the fact that both the superficial and deep venous trunks must be patent. Further-more, the femoral artery must be absolutely free from any thrombotic process. Although this vessel is usually found to be pulsating at the groin, I have seen a number of cases in which the occlusive change had ascended so high that not the faintest suspicion of pulsation in the femoral artery could be detected. This, however, is rare

Fig. 1.—A vein showing recent clot; the thrombus has become adherent to the wall at one point. The changes in the media correspond in situation to the places at which organization of the clot is beginning.

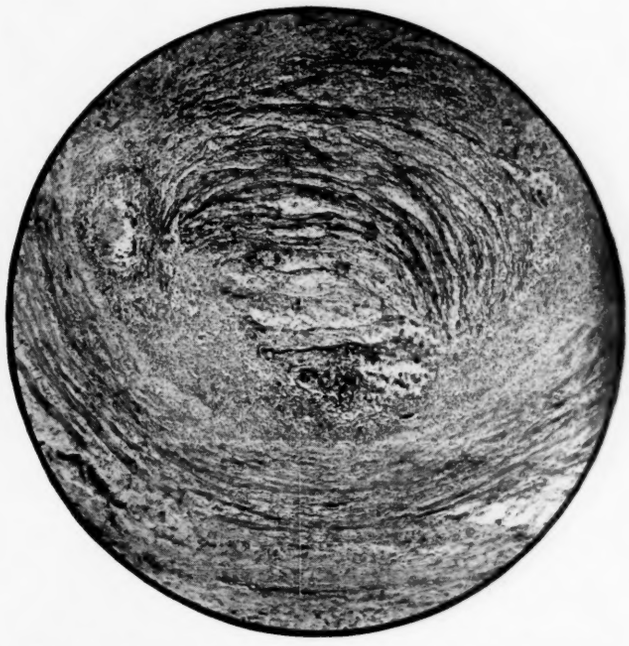


Fig. 2.—Recent thrombosis in a vein; about one-third of the cross-section shown. Below are the adventitia and media. The lumen is completely filled with recent clot undergoing organization at its periphery.

SCHEME OF OCCLUSION OF VESSELS IN EIGHT CASES OF THROMBOANGIITIS OBLITERANS*

Case	1	2	3	4	5	6	7	8†
Patient	I. L.	I. L.	D. F.	N. L.	S. S.	A. S.	A. P.	J. C.
	A. V. V.	A. V. V.	A. V. V.	A. V. V.	A. V. V.	A. V. V.	A. V. V.	A. V. V.
Popliteal	.....	.....	.....	+ +	.....	+ 0 0	.....	+ 0 0
Post. tibial	+ + +	+ + +	+ + +	+ + +	+ + 0	+ + +	+ + 0	+ 0 0
Peroneal	+ + ?	.....	+ 0 0	.....	+ 0 0	+	.....	+ 0 0
Ant. tibial	+ + 0	+ + +	+ 0 0	+ + +	+ 0 0	.....	+ 0 0	+ ? ?
Dorsal. pedis	+ + ?	+ + 0	.....	.....	0 0 ?	.....	+ 0 0	
Dorsal. hall	? + ?							
Metatarsal	+ + 0	.....	.....	.....	.....	.....	0 0 ?	
Princeps hall	0 + +							
Ext. plantar	+ + 0	0 + +	.....	.....	+ + +	+ + +	+ 0 ?	
Int. plantar	.....	+ + +	.....	.....	? + +	+ + +	+ ? ?	
Calcaneal	? + +							
Saphenous vein	.....	.....	.....	.....	+	.....	.....	+

* Explanation of table: Under the number of the case in each column are the initials of the name of the patient. A. = artery; V. = vein; + = closed; 0 = open; ? = not examined.

† In Case 8 there was no involvement of deep veins, but extensive obliteration of the internal saphenous.

and seems to occur especially when the disease is of many years' duration, or in patients in whom a low amputation had been performed. For in such cases the ablation of the limb had been done at a point at which the vessels were still occluded, and had thus failed to arrest the progress of the thrombotic process.

If we deflect the arterial current from the femoral artery into the femoral vein, below the termination of the long saphenous, we do so with a view to establishing

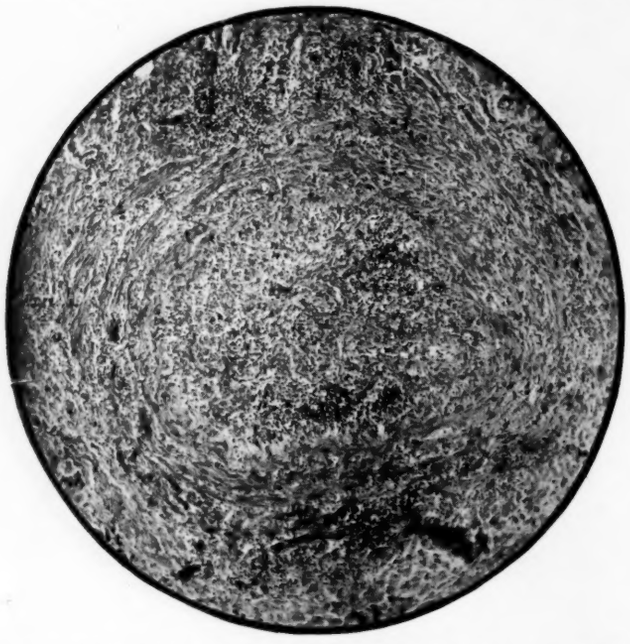


Fig. 3.—Obliterated vein. Closure of vein is of long standing. The media is infiltrated with round cells and capillaries; the lumen contains connective tissue, numerous capillaries, and blood pigment.

Fig. 4.—Type of old occlusion in a vein. The lumen is occupied by dense connective tissue enclosing blood spaces lined with endothelium, the result of canalization and organization of thrombus.

the following conditions: (1) the deep veins are to be transformed into arteries; (2) the blood must find its way into the capillaries where it meets the blood from the profunda and collaterals; and (3) a new centripetal flow must be established, primarily through a set of interanastomosing deep venules, but in the main finding its way into the vast network of superficial veins that empty in the long saphenous and thus into the femoral.

Fig. 5.—Artery and veins, showing various stages of the obliterative thrombotic process. Above, there are two veins, the large filled with very recent, the smaller with "intermediate" clot; in the center and below, an artery and vein are filled with sclerotic canalized tissue.

Fig. 6.—Recurring thrombosis in a large vein (popliteal). Only a portion of the cross-section is shown. Below and to the left are the adventitia and media. The lumen is filled with connective tissue, many capillaries and larger blood sinuses and thick-walled "daughter" canalizing vessels. One of these is recently thrombosed and contains a miliary giant-celled focus.

A glance at the schematic diagram, Figure 7, impresses us at once with a number of doubts as to whether such new conditions can be obtained. The most impor-

tant query that arises is, why the blood does not rapidly find its way into the superficial veins through the large anastomosing tributaries and then return without having been distributed to the tissues. This question is difficult to answer. However, in the light of the successful results that have been thus far reported in both animal and man, it would be foolhardy to cling to scepticism. Let us therefore rather try to explain just what readjustment of vascular flow must occur. Granted that the arterial blood reaches the tissues through the femoral, popliteal, anterior and posterior tibial and peroneal venæ comites, must not a large part enter the external saphenous vein and then be short-circuited into tributaries of the long saphenous and thus be carried centripetally by a short route? This certainly must occur. It would appear to me that this apparent complication or interference with the superficial veins as venous channels has certain advantages, at least in the period immediately following the anastomosis; for, through this short route, a back flow to the heart would be at once established, and the function of the superficial venous channels—with the internal saphenous as main efferent trunk—*as veins,* would be immediately determined. This accomplished, however, ligation of the external saphenous just below the popliteal would seem to be in order, so as to save as much arterial blood as possible for the nourishment of the limb. Whether or not ligation of the external saphenous is essential or whether it should be done immediately or some time after operation, experience alone can determine.

I have already referred to the rôle of the superficial veins in the new circulation. Now that we have become orientated as regards the direction of the flow, it is clear that the importance of the tributaries of the long saphenous can not be overestimated. I mention this because my clinical studies have made me aware of the fact that *migrating phlebitis,* or *thrombophlebitis,* in the territory drained by this vessel is not an uncommon occurrence.

The association of attacks of thrombophlebitis involving superficial veins with the symptoms characteristic of thromboangiitis obliterans has been overlooked apparently, for I can recall no mention of it in the literature. In my own series there are records of the incidence of such phenomena in seven cases. It was not, however, until a fairly large number of patients had passed out of my hands that my attention was directed to this circumstance, and I feel therefore that a careful questioning of some of my old patients might elicit similar histories. From the standpoint of the surgical treatment of these patients it appears to be of no little moment to know just how extensive such thromboses may be, what vessels are usually involved and how frequently previous attacks have occurred. For there seems to be no doubt but that the nature of the lesion is a thrombophlebitis with complete closure and final total obliteration of the affected veins.

I do not wish to dilate on this most interesting phase of the history of cases of thromboangiitis obliterans any further than is necessary to show how the phenomena manifest themselves, leaving a detailed description of some of my cases for a future publication. Suffice it to say here that spontaneous thrombosis, without apparent cause, may occur in the larger veins of the arms, but most frequently in the long saphenous and its tributaries. I am speaking here not of the secondary thromboses that are sometimes seen complicating the gangrenous process, but of an independent lesion appearing here and there along the course of the saphenous or some of its tributaries, now in the thigh, now in the leg, at one time manifesting itself as a hard tender cord with or without tendency to spread, and at other times showing itself in the form of multiple indurated areas or cutaneous nodosities. When, in two of the cases, I noted that a fresh exacerbation of the superficial thrombotic process was accompanied by distinct symptoms pointing to aggravation of the disease of the deep vessels (thromboangiitis obliterans) the suspicion which I had already entertained as regards the relationship of the two conditions, became considerably strengthened. Be that as it may, for our purpose it is enough to record the fact that a certain number of these patients suffer from attacks in which tributaries of the long or external saphenous, or the trunks themselves, become diseased and closed.

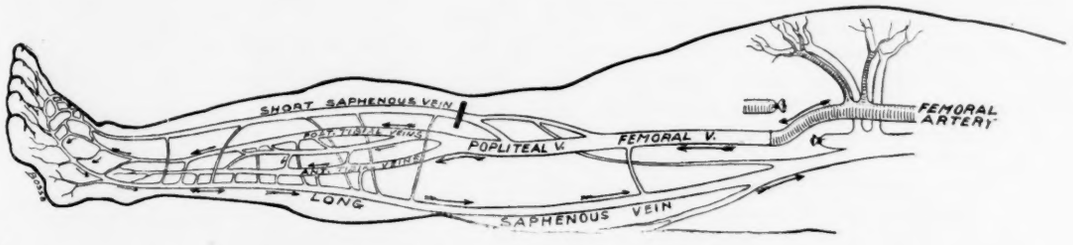


Fig. 7.—Schematic diagram, showing blood supply of leg.

Whereas it is a relatively easy matter to determine with a fair degree of certainty whether or not the patient possess patent superficial veins, the question as to the involvement of the deep veins is a most puzzling one. From the histories and from my own observation in three cases I would be willing to state emphatically that arteriovenous anastomosis would not succeed in them. For in these patients I have watched the recurrence of thrombophlebitis throughout the thigh and leg, have seen it come and go, have found it extending even down into the sole and have extirpated pieces of such veins when they were recently occluded and later when they were mere fibrous cords. A careful questioning, then, may in such instances give us all the information we desire.

On the other hand, what signs and symptoms are of value in indicating the patency or occlusion of the deep veins? Have our clinical observations thrown any light on this question? It is here that we have to concede the inadequacy of our clinical methods. Looking over the histories of the cases in which amputation showed marked obliteration of the deep veins, I find that in two of these distinct mention was made of cyanosis in the dependent position of the limb. Whereas the capillary blush, or erythromelia, made its appearance first in the

usual fashion, the onset of cyanosis was more rapid and its degree more intense than in most of the other cases. Here, then, we have at least one sign which may be of service to us in this connection. Although investigations along these lines are not particularly promising, we may yet hope to learn a great deal by comparing careful clinical notes with pathologic findings. I have still a number of cases under observation which may prove particularly illuminating. In one of these—that of a patient whom I have watched for four years—the cyanosis following the temporary erythema is very pronounced and there have been numerous attacks of migrating thrombophlebitis of both the upper and lower extremities pointing at least to involvement of superficial veins.

For the future study of this particular phase of the subject I have begun the trial of the following test, by means of which we may be able to learn something about the sufficiency of the deep veins: I allow the limb to hang, watch for the advent of the erythema and wait until a fair degree of cyanosis has become established. This may take considerable time—five to ten minutes. The veins are then obliterated above the knee by means of a Martin bandage properly applied. The limb is then raised high and the bandage loosened just enough so as to remove pressure from the deep, but not from the superficial veins. If the cyanosis is slow in disappearing or fails to disappear, it may be concluded that the function of the deep veins is impaired.

Seeing the cases as we do at such diverse stages in the development of the disease, it is a difficult matter to decide as to what therapeutic measures to employ. Although I have been able to collect many data on the course of the disease after various modes of treatment, and after the appearance of the various characteristic symptoms there still remains a great deal to learn before the chapter can be closed. It may be well, however, to mention those facts which, at the present state of our knowledge, must determine us in the course which we would pursue. When the patients seek advice they usually present one of the following groups of symptoms:[5]

1. There is an ulcer that refuses to heal; erythromelia is present; neither the dorsalis pedis nor the posterior tibial arteries pulsate; the patients are suffering from their first attack of trophic disorder.

2. The same symptoms as in Group 1, except that inflammatory signs in the region of the ulcer or local dry gangrene indicate to us that the affected part of the limb will not recover.

3. There is a history of a number of recurrences such as belong to Group 1. The pain is extreme; recovery of the part is doubtful.

4. The gangrene has already involved one or more toes.

5. In the old cases in which sufficient collateral circulation must have been established years previously, the patients are over 45 years of age and suffer from a fresh exacerbation with gangrene. They have a combination of the lesions of arteriosclerosis and thromboangiitis obliterans.

6. There are no trophic disturbances; the patient may or may not have had previous attacks. The symptoms belong to the type of "intermittent claudication." The pain is either bearable or so intense that the affected limb is useless.

7. An acutely progressing affection of the vessels of one limb is evidenced by the exquisite pains and other typical signs with or without signs of trophic disorder. In some cases one limb has already been lost.

8. Any of the above pictures may be combined with attacks of migrating thrombophlebitis.

9. With any of the above pictures there may be absence of pulsation in the popliteal, or femoral arteries, or of both.

10. In those neglected cases in which a conservative operation has been done resulting in a chronic ulcerative or chronic gangrenous condition, there are usually extensive chronic inflammatory changes in the vessel and nerve sheaths and between the muscular planes.

11. The picture is dominated by attacks of ischemia that are especially marked in cold weather and involve the toes, with or without the rest of the foot. Cyanosis may be a feature in the dependent position. Either the dorsalis pedis or posterior tibial artery, or both, seem pulseless. Pain may or may not be present. The other leg may be unaffected or show one of the other groups of symptoms.

12. In those doubtful cases that belong either to this group or to the "acrocyanoses," erythromelia and ulcers may be present, but all the vessels pulsate. They are examples of an angiospastic condition, or, perhaps, they belong to a group of thromboangiitis obliterans in which only the deep veins are involved. I have had no material from such cases, and am, therefore, still undecided as to their nature.

Reviewing these conditions we ask ourselves: "When shall we suggest arteriovenous anastomosis between femoral artery and femoral vein?" In a general way we should be influenced in favor of the operation by the following considerations:

1. The feasibility of performing a perfectly functionating anastomosis; this necessitates a fairly healthy condition of the femoral artery and vein.

2. The presence of proper conditions for the production of a better vascular system. This includes patency of the deep veins, patency of the superficial veins, at least of the internal saphenous and its tributaries (the external saphenous not being theoretically necessary), a good pulsating femoral artery and a good general condition of the patient.

3. The absence of extensive local infection with ascending chronic interstitial inflammatory process.

4. The suffering of the patient.

5. The uselessness of the limb.

6. The history of the loss of the other limb.

7. The absence of attacks of migrating phlebitis.

8. Evidence of arterial occlusion, such as absent pulsation of anterior tibial, posterior tibial and popliteal arteries.

9. The presence of signs indicating that the limb can not be saved by other means.

Keeping the above essentials in mind, the cases in which the operation would be most clearly indicated are the following: Those of Groups 2, 3, 4; Group 6 if the pain warrants intervention; Group 7 if not of too long duration,[6] and finally those of Group 1 if the pa-

5. These twelve groups are not to be regarded as definite, mutually exclusive classes. A patient's symptoms may fall within one or more of these, depending on the period in which he comes under observation. The patient's symptoms may pass from one group into another, as we watch them month after month. However, at any particular time in the life history they usually present one of the pictures described.

6. I add this reservation, for in one case of this group, the deep veins were found extensively thrombosed by fairly recent clot, although gangrene was not yet present. The leg was amputated at the request of the patient, because of the pain.

tients demand relief and the trouble is not alleviated by proper conservative treatment.

I have discussed this subject at such length because I feel that by my own studies I may possibly have contributed something toward directing other observers into those paths that may lead toward a more thorough understanding of one of the most interesting and difficult diseases that we are asked to treat.

I take pleasure in acknowledging my indebtedness to Miss Adele Oppenheimer, assistant in surgical pathology, Mount Sinai Hospital, for her valuable and efficient aid in collating many of the data on which I have drawn, and in thanking Dr. F. S. Mandlebaum, director the pathologic laboratory, for the preparation of the photomicrographs. Finally, thanks are due Drs. Lilienthal, Gerster, Sachs and the other members of the Mount Sinai attending staff, through whose generous cooperation a large part of the material for study became accessible to me.

63 East Ninetieth Street.

THE APPROPRIATE INSIGNIA FOR THE AMERICAN MEDICAL ASSOCIATION

SAMUEL P. GERHARD, A.M., M.D.
PHILADELPHIA

An emblem, to be appropriate, should be so devised as to convey a meaning suitable to the organization which carries it as a badge; therefore it seems strange that the American Medical Association should have adopted for its use the device of the red cross, which belongs to another organization and represents a character of work entirely different from that of the medical profession.

The American National Red Cross, through its executive committee, passed resolutions Oct. 18, 1907, which decided that by reason of an international agreement the emblem of the red cross was adopted to designate the personnel of sanitary corps, and was to be used in time of peace or war to protect sanitary formations, establishments and personnel and material.

Furthermore, in order that the emblem should be kept in its proper place, legislation has been recommended to prevent its use by private persons or by societies, and the executive committee has requested that all hospitals, health departments and like institutions kindly desist from the use of the red cross and suggests that some other insignia be substituted for it.

Some commercial houses which manufacture surgical necessities and appliances, together with some nostrums, print the red cross on their packages of kidney plasters, dog soap and dyspepsia medicines. There is a nurse's school which claims to teach nursing in a short term of a few weeks and calls the graduates "red cross nurses" who go out in competition with those who have served several years in hospitals.

In many of the large cities throughout the United States druggists are fond of naming their places "Red Cross Pharmacy." In New York and Chicago physicians have placed this symbol on their automobiles—whether this gives them more privileges than they would otherwise have is a question; it appears more as an advertisement than an explanation for speed. On state occasions some use it as a chevron on the sleeve, and sometimes the police think they have a right to it during large parades and wear it before the crowd.

There may, however, be raised the question of priority of use, inasmuch as the red cross was adopted by the American Medical Association before the laws were passed, and therefore the latter has a perfect right to its use. This all may be true, but when we come to consider the objects of the Red Cross as originally set forth in 1864 we must concede that its use was not intended solely for the medical man but for all connected with the work of relief. Besides, we should be charitable enough to consider that we have appropriated an emblem devoted to humanitarian work.

What, then, is the proper badge of the medical profession?

In the United States Army the device of the surgeon is Mercury's wand, consisting of a rod surmounted by a pair of wings with two serpents twined about it. Carefully examining the literature on the subject of Mercury we learn many facts arguing against the use of this latter emblem in the healing art. We shall see that it belongs strictly to commerce and trade; the name "Mercury" itself is derived from the Latin *merx, mercis*—"goods." Mercury was the Roman divinity of commerce and gain; also *mercor*, to traffic, is from the same root; the word *mercatus* is akin to our English word "market," as is also the word *mercator*, "merchant."

Mercury, the Roman god, is identical with the Greek god Hermes and was considered the god of diplomacy, arts, sciences, commerce, gain and riches, especially of sudden and unexpected riches and of good luck at the games. He was usually represented with a purse in one hand, his magic caduceus in the other, and was supposed to preside over the commerce of the Romans.

The magic caduceus of Mercury is an evolution of the staff of Hermes, and the original caduceus or staff was an olive branch with garlands. Later ribbons were substituted for the garlands and finally mythologists transformed the ribbons and garlands into snakes, about which others, like Hyginus, invented various tales, one of them being that Hermes found two snakes fighting in a garden and, dividing them with his wand, chose this as a symbol of the quarrels which it was his duty to assist in settling. After a time a pair of wings was added to the staff to indicate the speed of Mercury as a divine messenger; it also became a symbol of power that produced wealth and was supposed to be an enchanted wand of prosperity.

Owing to the fact that Mercury's wand is used by the United States Army and by some medical publishers, and is to be placed on the ambulances of some New York hospitals, it would appear to be the proper emblem; but, studying the references which we have just gone over, we learn that it is more adapted to merchants, delivery wagons and steamships and is a commercial device. With the knowledge that the red cross and Mercury's wand are incorrect emblems, what, then, shall we consider the true insignia for the healing art?

The medical profession should be proud of the fact that a symbol has been handed down from ages past, though it was lost to some extent by those who forgot history and our traditions and desired something new for a device. The true ancestral symbol of the healing art is the knotty rod and serpent of Esculapius. Delving into the history of this symbol we find a veritable mine of facts which will convince us that we have a heritage worthy of our profession. It is customary to trace the history of medicine back to the story of Esculapius, whom the Greeks elevated to the position of the god of medicine. He was revered and worshipped

throughout Greece, but the great center of healing was at Epidaurus, where a beautiful temple was built to his honor in which his statue by the sculptor Thrasymedes stood. This statue, of gold and ivory, the head bearded and surrounded with rays, a knotty stick in one hand, the other entwined by a serpent, gives us the original symbol of the healing art.

Serpents of a peculiar kind were kept in the temples. Votive tablets also have been found on which the ailments were inscribed and which were similar to our hospital case records. No doubt Hippocrates, the "father of physic," gained much of his knowledge of medicine from these tablets, for some of his reputed writings and formulas, such as Prorrhetica or Prædictiones and Coacoæ Prænotiones, are very much like them. He was a decendant of the early Asclepiades and was said to be the nineteenth in descent from Esculapius. He inherited the instruction of his fathers though a long line of physicians and was well versed in the practice of his time.

Later on we find the Greek practitioners coming to Rome, and the practice of the Asclepiades came with them. According to the Roman law they were freedmen. After a time they established shops, on which they placed the sign of the Esculapian snake and practiced their art and sold medicine; the Romans called them *medicinæ*.

We learn from Ovid that on the occasion of the great plague in Rome, at the command of the Delphic oracle, B.C. 293, an embassage was sent to the temple of Esculapius at Epidaurus, whence was brought a living serpent which was received with great ceremony by the Romans. They built a temple on the Tiber and the serpent was placed therein.

Now let us glance at the sources of this serpent idea as found in the earlier times and the strange ramifications of the respect for the serpent among barbaric races. In the earliest civilized times we find that the Egyptians represented the eternal spirit "Kneph" as a serpent. Osiris in snake form was usually associated with health; the Chaldean Hoa was identical with the *Agatho-dæmon,* which the Hebrews, who were in Egypt for over four hundred years, learned to regard as the symbol of health and life. Thermuthis, the sacred asp, was associated with Isis, the goddess of life and healing.

The serpent's change of skin may have been suggestive of resurrection and renovation; he was feared because he was supposed to possess superhuman knowledge and power. His supposed longevity was, no doubt, the reason why this animal entwined about a staff was symbolic of health and the distinctive attribute of the classical Esculapius and Hygeia.

We find also that the Phenicians adored the serpent as a beneficent genius. The Hindoos had a serpent deity, Rudra, who was not only beautiful and strong but also the healer. The Druids had serpents in the sanctuary to bring good fortune. The Python of the Greeks in the table of Apollo, described by Ovid, was all-powerful; the Celts, the Basques and all Asia had legends of the Orm and the Paystha pictured as a great dragon.

We are all familiar with the fables of St. Michael and St. George, and, turning to the Chinese, the winged dragon or serpent is a symbol of superior wisdom and power.

In the folk-lore of the Gauls and Germans the white snake, when boiled, was considered to have the attribute of conferring wisdom in medicine. The white snake was also venerated by the Scottish highlanders, as well as by certain Arabian tribes, as a mighty agent and the king of all serpents.

Following this thought into America, let us learn what the Indians believe in this respect. The general idea among them is that it brings happiness. Professor Agassiz tells us that he found the Maues Indians, who live in Brazil, whenever they assign a form to any *remedio,* give it that of a serpent. Among the Lenape Indians their famous doctors were called "big snakes."

We must not forget to look into Holy Writ for the symbolical influence and intelligence of the serpent in the history of the fall of man, where it is stated, "Now the serpent was more subtle than any beast of the field."

In the story of the Exodus we have many allusions to the serpent as a power for deliverance. Aaron's serpent rod is an instance. Also during the wanderings in the wilderness Moses placed a brazen serpent on a pole in the midst of the camp, which was preserved for many centuries, until the days of Hezekiah, when it was broken to pieces because it became an object of worship and tended to turn the people from their true God.

During the Christian era the serpent was employed to signify the virtue of prudence and wisdom; the disciples were admonished, "Be ye wise as serpents."

In the Latin church of the early days the pastoral staff terminated at the top with a serpent, indicating power and wisdom.

Whatever element of superstition or imagination may have been injected into these stories of mythology and the legends of more recent times, there is a wonderful history hidden behind them, all of which permeates the whole human race.

Man in his primitive state and in his more civilized life believes there was a superior power for good, and his mind, requiring a material expression of that unseen source, used the serpent as a symbol of power and wisdom. Without this the rod of Esculapius would be impotent over disease and the wand of Mercury would have no authority over trade or commerce. The cultured Greeks therefore, having great respect for the healing art, honored it with the most significant and expressive symbol of the highest attributes conducive to the welfare of the race.

Among the orientals the shepherd was considered the highest type of citizen, whose life in the open country brought him in contact with great struggles. The rod was the weapon with which he struck down the adversaries of the sheep; the staff or crook, however, was used for their guidance in the proper path on the trackless pastures. Hence we read in the beautiful pastoral song of the "shepherd king" these expressive words: "Thy rod and thy staff they comfort me." The rod therefore became the symbol of a defending power which brought comfort and support to the weak in the consciousness that they were protected from all danger.

Esculapius was always pictured with a knotty rod in his hand, the knots indicating the many difficult problems of physic to be solved in the treatment of the ailments of mankind. Therefore, applying these thoughts to the symbol, we have in the entwined serpent, power, wisdom and health, together with the protection and support against disease and the difficulties to be overcome by the knotty rod. With this historical symbol the sanctity of medicine can be pictured and the doctor is shown in his true light, not only as a labora-

tory scientist and as a practitioner, but as a teacher and adviser to the patient, the family and the community in all the difficult problems that arise concerning health and disease.

This dissertation on the meaning of the medical emblem will suggest the appropriate insignia of the American Medical Association to be as follows: A shield on which is emblazoned the American eagle holding in its talons a laurel wreath within which is the knotty rod and entwined serpent and the letters A.M.A., of which a design is here submitted.

Suggested design for an emblem for the American Medical Association.

The explanation of the emblem so devised would be as follows: The eagle represents the national organization of the United States; the laurel wreath stands for the crown which the Romans bestowed on the healing art; the entwined serpent is indicative of power, wisdom and health, and the knotty rod signifies protection and support in the difficult problems of the treatment of disease.

SUMMARY

The insignia and device of the red cross belongs to another organization and its use is not proper for the medical profession. It represents a character of work entirely different.

From the fact that Mercury was the Roman god of trade and commerce and his magic caduceus was the symbol of authority over trade and commerce and was the enchanted wand of prosperity, it is not adapted to be an emblem for the healing art.

The knotty rod and serpent of Esculapius is the ancient inheritance of the medical profession, and the history of this symbol, together with its mythology and its legends, prove its appropriateness, for the reason that the serpent was considered by every race on the globe as a great power and man's mind used it as a symbol of wisdom and health.

The knotty rod is an expressive representation of support, protection and comfort in the difficult problems arising in the management of disease.

NOTE.—It may interest readers of this paper to consult some of the following authorities on the subject:

Smith, William: Dictionary of Greek and Roman Biography and Mythology.
Niebuhr: History of Rome.
Harper's Dictionary of Classical History and Antiquities, and Encyclopædia Americana.
Walton: The Cult of Æsculapius.
Brinton: The Myths of the New World.
Parke: Epitome of the History of Medicine.
Bulletin American National Red Cross, Nos. 1 and 2.
McClintock and Strong: Cyclopedia of Biblical, Theological and Ecclesiastical Literature.
Wake: Serpent Worship.
Meyer: The Shepherd Psalm.
Dunglison: History of Medicine.
Blair and Crawford: Design.

639 North Sixteenth Street.

Importance of Dental Orthopedics.—F. A. Gough (*Amer. Jour. Obstet.*, April) states that though parents desire that their children have good permanent teeth, few realize the importance of saving the deciduous teeth till their mission is accomplished.

Clinical Notes

ACUTE PECTORAL (THORACIC, ANTERIOR AXILLARY) LYMPHADENITIS FROM CUTANEOUS INFECTIONS OF THE LOWER LATERAL CHEST AND UPPER ABDOMINAL WALL

WALTER M. BRICKNER, M.D.
Assistant Adjunct Surgeon, Mount Sinai Hospital
NEW YORK

Based on the observation of three cases, I published the following editorial note in the *American Journal of Surgery*, April, 1906:

A tender, painful swelling just at or beyond the upper, outer border of the breast, and near the edge of the pectoralis major, is usually an inflamed lymphatic gland. In its presence it is well to look for some skin infection about the waist line, e. g., furuncles, which are not rare at this site as a result of irritation by the corset. *Per contra*, with a boil, abscess, dermatitis or other infection at or above the waist line, one may be on the lookout for glandular enlargement at the point referred to.

Fig. 1.—Photograph showing pectoral adenitis, and location of furuncle causing it.

Two similar cases have since come under my care. All five of the patients were women. In four the exciting lesion was a furuncle, and suppuration slowly developed in the glands; in the other case infection of a superficial burn over the lower costal cartilages caused the lymphadenitis, which resolved without suppuration. Four of the patients had previously consulted other physicians, who had regarded the thoracic swellings as neoplasms.

The patient from whom the accompanying photograph (Fig. 1) was made presented herself recently at the Mount Sinai Hospital Dispensary, with the statement that the hard swelling in the right anterior axillary line, above the breast, had been developing for three weeks. She said that at two clinics the diagnosis of cancer had been made and radical operation advised. The assistant who first examined her at the Mount Sinai Hospital Dispensary was also inclined to look on

the swelling as a neoplasm until it was suggested that he examine the line of corset pressure for the cause. A receding furuncle, shown in the photograph, was there found. Five days later the thoracic swelling was larger, somewhat reddened and adherent to the skin, but still fairly hard; an incision evacuated pus and thereafter the tumor promptly subsided. Just before it was incised two colleagues—both men of experience and training—pronounced the swelling an "undoubted carcinoma."

The mistake is most apt to be made in women with large, firm mammæ, in whom the proximity of the tumor suggests its involvement of outlying breast tissue. The lesion is probably more common in women than men for the reason suggested in the above-quoted note.

In "The Lymphatics," by Poirier, Cunéo and Delamare,[1] the axillary glands are divided into the following groups: (1) humeral, (2) thoracic, (3) scapular, (4) central or intermediate, (5) subclavian. The thoracic, pectoral or anterior group or chain consists of a superointernal portion, overlying the second or third intercostal space beneath the pectoralis major, and an inferoexternal portion, over the fourth and fifth intercostal spaces, along the long thoracic artery. As will

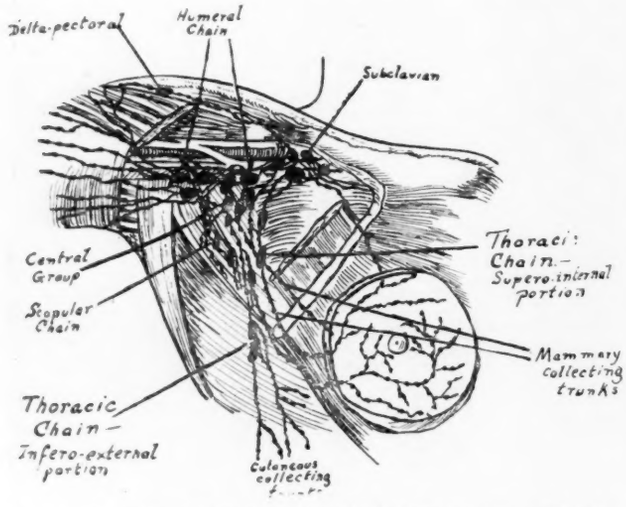


Fig. 2.—The axillary glands and lymphatic drainage (After Poirier)

be seen in Figure 2, "the anterior cutaneous and the mammary lymphatics more particularly end in the superointernal group; the absorbent vessels of the lateral wall of the thorax in the inferoexternal group" (Leaf).

It is, then, the superointernal (portion of the thoracic) group which is usually early involved in breast carcinoma. The inferoexternal portion, on the other hand, is affected in cutaneous lesions of the lower lateral chest wall and of the upper abdomen; when inflamed, these glands form a mass over the fourth rib near the outer edge of the pectoralis major, sometimes partly beneath that muscle.

The text-books of surgery discuss acute lymphadenitis in general rather than in anatomical detail.[2] They make no more specific reference to the lesion under consideration than such general statements as "all infections in the upper extremity, the adjacent thorax, or the breasts, may produce [axillary] lymphadenitis with or without a recognizable intercurrent lymphangitis."[3]

This note is written, therefore, to call attention to a condition but little described and often misinterpreted.

30 West Ninety-second Street.

1. Translated and edited by Cecil H. Leaf.
2. The surgical text-books by the following authors and editors have been searched in vain for a reference to acute pectoral adenitis: von Bergmann (in German); von Bergmann-Bull (English); Bryant and Buck (incomplete); Keen, Fowler, Da Costa, Walsham, American Text-Book of Surgery, Dennis, Park, Tillmann (in German and English), Wullstein und Wilms, Wyeth, Brewer; likewise the works on surgical anatomy by Deaver, Woolsey, Eisendrath; and various works on surgical diagnosis.

LIMITED SUBSCAPULAR MYOPATHY WITH ABSENCE OF FACIAL, HUMERAL AND CRURAL INVOLVEMENT *

GEORGE E. PRICE, M.D.
Associate in Nervous and Mental Diseases at the Jefferson Medical College
PHILADELPHIA

The following case is of interest chiefly on account of the unusual distribution of the atrophy. It does not conform at all to the pseudohypertrophic type or to the Landouzy-Déjerine type, but approaches more nearly the scapulohumeral or juvenile type of Erb.

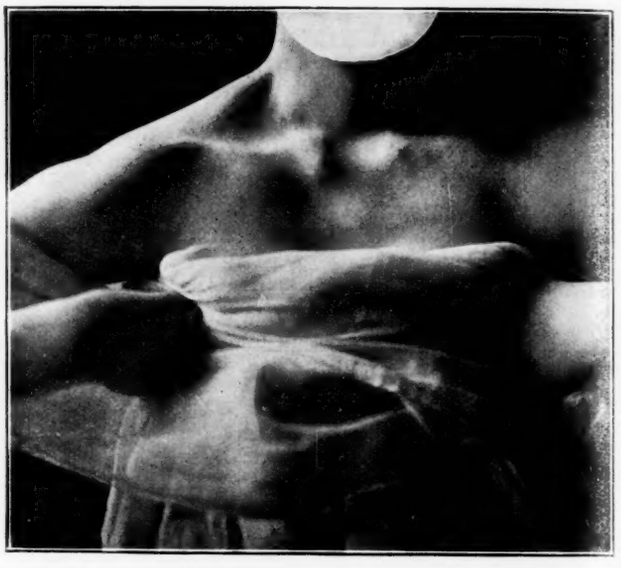


Fig. 1.—Front view of patient with muscular atrophy of a type approaching Erb's scapulohumeral or juvenile type.

History.—The patient, E. H., a white girl, aged 17, was a patient at the neurologic dispensary of the Jefferson Medical College Hospital. She had chickenpox and gastric fever at 8 years of age, and an attack of chorea at 9 years. This latter was caused by a fright, lasted six months,and was of unusual severity. She was never very robust.

Present Illness.—The onset was so gradual that it was impossible to say just when the wasting commenced. Two and a half years before the time of examination the attention of the patient's mother was attracted to what seemed to be an unusual concavity in the front of her chest, but it was not until several months later that the flaring of the right shoulder-blade was observed. Shortly after this the patient noticed a prominence of the sternal end of the right clavicle and experienced difficulty in raising the right arm to arrange her hair. About six months before the examination the same symptoms were found to be commencing on the left side. There was never any pain until the condition was well advanced, and then only an occasional aching or soreness of the right shoulder and back after exertion. Six months before the first symp-

3. Von Bergmann-Bull, iii, 80.

* Presented before the Philadelphia Neurological Society, Feb. 26, 1909.

toms were observed the patient collided with a horse and buggy while riding a bicycle, sustaining a sprained ankle and considerable shock. This was the only history of trauma. An older sister, who used to bathe and care for the patient during her infancy and early childhood, was positive in her assertion that at this time there was no deformity present.

Examination.—The patient was a fairly well-nourished girl, presenting marked flaring of the right scapula, with wasting of the underlying serratus and rhomboid muscles, and with a similar but much less marked condition of the left side. Anteriorly there was an abnormal concavity on both sides of the upper chest, most marked on the right side. The right sternoclavicular articulation was unusually large and prominent. The patient was unable to raise her right arm higher than the level of the shoulder, and when she attempted to elevate or bring the arm forward, the scapula glided on the shoulder. When the scapula was held firmly in place against the ribs in its normal position the arm could be fairly well raised. There was no wasting of the deltoid, supra or infraspinatus on either side, or any wasting of the thenar, hypothenar or interosseous muscles. The lower extremities presented no wasting or pseudohypertrophy. The atrophied muscles presented no fibrillation, and the electrical reactions were normal.

Diagnosis.—The condition had to be differentiated from the serratus palsy due to disease of the long thoracic nerve; from

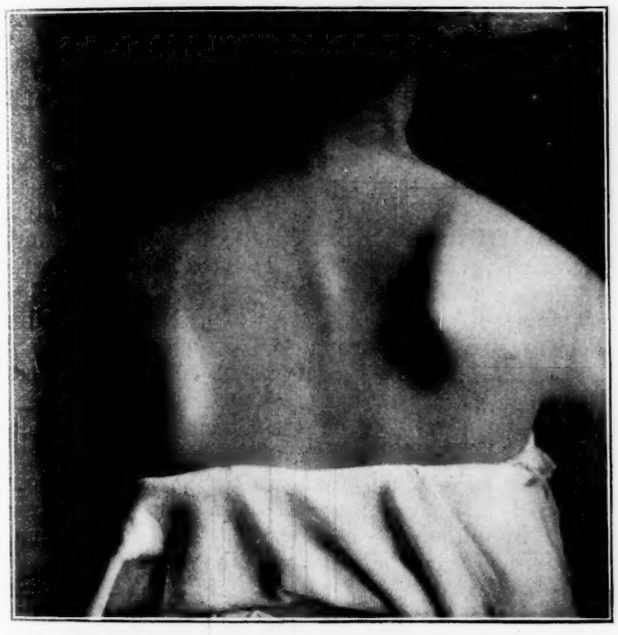


Fig. 2.—Rear view of same patient (with muscular atrophy) shown in Fig. 1.

progressive muscular atrophy of spinal origin; and from congenital elevation of the scapula or Sprengel's deformity. Opposed to neuritis was the absence of exciting cause, the absence of reactions of degeneration, and the slow progressive course with bilateral symptoms. The age of the patient and the absence of fibrillation and reactions of degeneration differentiated the condition from a chronic anterior poliomyelitis; while the fact that symptoms were not observed until after infancy, and the progressive course, separated it from Sprengel's deformity.

Treatment.—When the scapula was held in place by the hand or the point of the shoulder held backward, the arm assumed a normal position and the range of movement was greatly increased. This fact suggested the advisability of a brace, and I referred the patient to the orthopedic department, where she was fitted with an admirable apparatus which fixed the scapula and to a certain extent held the shoulder back as well. Massage, galvanism, and the high-frequency current have been given her. She is certainly more comfortable and the wasting does not seem to have progressed under my observation.

I am indebted to Dr. F. X. Dercum for the privilege of placing the case on record.

NEW ABDOMINAL RING SPECULUM

H. EDWARD SAUER, M.D.

Associate in Gynecology, Northwestern University Medical School; Attending Surgeon, German Hospital

CHICAGO

Too many forceps about an abdominal wound, one of which might become lost in the abdomen; too much catching of suture and ligament material about the hemostats, impeding work and annoying the operator, especially when forced to hurry in his work; too much loss of the assistant's power, due to his hands being so much employed in pulling retractors—experience of all these hindrances caused me to scheme to obtain some simple device to do away with these difficulties. The set of rings, which my instrument-maker has called an abdominal ring speculum, is the result.

Fig. 1.—Abdominal ring speculum in three of the six sizes; and blunt-pointed retractor for use with the speculum.

The next thought which occurred to me was that of stretching a large sheet of sterile rubber dam over the ring, a small hole having been cut in the center of the sheet of rubber dam, thus completely covering the edge of the wound, skin and umbilicus with sterile rubber sheeting, and in a far more convenient way gaining the object sought by the use of gutta-percha varnishes, pastes, etc. This convenience has afforded me much comfort in my operative work in the past year, and furnishes a field of observation in clinical teaching heretofore unattainable.

Its use is simple. The method is as follows:

1. Make the abdominal incision the desired length, and then clamp and twist or ligate only the spurting arteries. The oozing points will be controlled entirely by the pressure of the ring and need not be individually clamped.

2. Open the peritoneum and place the patient in extreme Trendelenburg position.

3. Grasp the abdominal wall with the hand and have the assistant do the same on the opposite side.

4. Pull the abdominal wall forward and with the other hand work the intestines up toward diaphragm.

5. Place the laparotomy sponges and pack them tightly toward diaphragm, placing one clamp on all the tapes attached to them and collected in one bundle.

6. Place the rubber dam around the abdominal speculum, and then insert the ring into the abdominal opening in such a way that the wall of the abdomen on one side only fits into the groove around the ring.

7. Now spread the rubber dam over the patient, and, while holding the ring in place with one hand, gradually, inch by inch, push the opposite abdominal wall outward over the edge of the ring, when it will immediately snap into the groove and remain there. The whole proceeding is similar to clinching on an automobile tire.

Fig. 2.—Ring speculum, rubber dam and retractor, in use.

The ring, once in place, is held there by the abdominal wall very firmly; in fact, it requires a particular maneuver to get it out.

Since it may, in the course of the necessary work on a given case, become desirable to get a little further to one side or the other, a hook is furnished with the rings, bent to fit exactly on the inner curve, by means of which retraction can be accomplished. Retraction in this way is superior to the older methods in that one is always retracting a perfect circle.

No claim is made for a universal application for this abdominal ring speculum, but it is of service in by far the greater number of abdominal cases. A little use will soon demonstrate its value to the operator, and he will quickly find out that it has a far greater use than would at first appear.

One of the first criticisms of the instrument that I have heard is that too large an incision has to be made. Those who make this remark forget the natural resiliency of the tissues. The incision does not have to be any longer than the greatest diameter of the ring. About half an inch greater than the internal diameter of the ring is all that is required.

Another criticism is that it is undesirable to cut the patient to fit an instrument. This remark is made without due consideration, for it is to avoid this necessity that a series of six rings is made, with interior diameters, 4, 3½, 3, 2½, 2 and 1½ inches, thus affording a ring convenient for any incision.

I have used the abdominal ring speculum in fifteen cases, with not only satisfactory but brilliant results. I have not had a wound infection in any one of the cases.

This being only a preliminary report, no detailed account of cases will be given, but a later article will take up those details.

100 State Street.

DEVIATION OF COMPLEMENT WITH FAILURE OF COMPLETE HEMOLYSIS (WASSERMANN REACTION) IN CERTAIN, NON-SYPHILITIC, HUMAN SERA

A PRELIMINARY COMMUNICATION *

JAMES G. CUMMING, M.D., AND FRANK SMITHIES, M.D.
ANN ARBOR, MICH.

The specificity of the so-called Wassermann reaction together with its clinical interpretation have been matters of comment and criticism since the introduction of the test. Granting that in all cases in which work has been reported, the technic and the component parts of the manipulations have been beyond question, it has been frequently noted that cases of undoubted syphilis, clinically, have failed to give positive reaction. Conversely, the literature already contains rather frequent mention of failure of hemolysis in instances in which leutic history has been eliminated and in which individuals have been ill from various other ailments.

Landsteiner[1] found that when rabbits had been inoculated with *Trypanosoma equiperdum* their serum caused inhibition of hemolysis. Weil and Braun[2] noted positive indications from the test in cases of pneumonia, typhoid fever, tuberculosis, diabetes and certain tumors variously distributed throughout the body. Munch and Eichelberg[3] have called attention to the fact that serum from patients affected with scarlet fever behaved similarly. However, Ivy McKenzie[4] notes no inhibition of hemolysis in nine cases of scarlet fever, four cases of lobar pneumonia, three cases of bronchopneumonia and six cases of typhoid. In six cases of tuberculosis hemolysis was complete, and in four out of five cases of chronic tuberculosis there was no inhibition. Butler[5] obtained the reaction in three cases of noma, in which the etiologic factor appeared to be due to *B. fusiformis* and a spirillum. Gay and Fitzgerald[6] report no positive reactions in patients affected with acute conditions such as typhoid fever, pneumonia, meningitis and tuberculosis.

In the course of our work with the Wassermann reaction, we have observed that blood serum of evidently

* From the Laboratory of the Pasteur Institute at the University of Michigan.

1. Referat am Internat. Kong. f. Hyg., 1907.
2. Wien. klin. Wchnschr., 1908, No. 26.
3. Med. Klinik., 1908, p. 671.
4. British Jour. Path. and Bact., January, 1909.
5. New York Med. Jour., Jan. 30, 1909.
6. Boston Med. and Surg. Jour., Feb. 11, 1909.

non-syphilitic patients, who are in progress of treatment for rabies or who have recently taken such treatment, by the Pasteur method, possessed certain properties which prevented or influenced the lysis of sheep's erythrocytes.

Details of cases, together with practical and theoretical considerations need not greatly concern us here. Suffice it to say that it would appear that the partial or total absence of hemolysis in these Pasteurized patients is explained by the fact that this class of patients in the course of the prophylactic treatment, receive rabbits' blood serum as an extrinsic substance. Consequently, from these injections, they become more or less perfectly sensitized to rabbit's serum.

By the original procedure of the Wassermann reaction, the extrinsic components are obtained from the rabbit (amboceptor), the guinea-pig (complement) and sheep's blood (erythrocytes).

It apparently follows that if one uses the rabbit to obtain hemolytic serum (amboceptor) for the sheep's erythrocytes, this serum after inactivation, will give the precipitin reaction with the sensitized human serum of the Pasteurized patient and the complement (from guinea-pig). This precipitin reaction is due to the presence of amboceptor in the blood serum of the patient who has had the prophylactic injections of rabbit's serum according to the Pasteur method, and to the receptor in the inactivated rabbit's serum. This inactivated serum, in the presence of complement (guinea-pig's serum) and sensitized erythrocytes (sheep) gives rise to a deviation of complement. It thus follows that there is a fixation of complement in both the precipitin reaction present and in the process of hemolysis.

The consideration of the resulting partial or complete absence of hemolysis, together with a fuller explanation of the phenomena connected therewith, we shall endeavor to take up in a future communication.

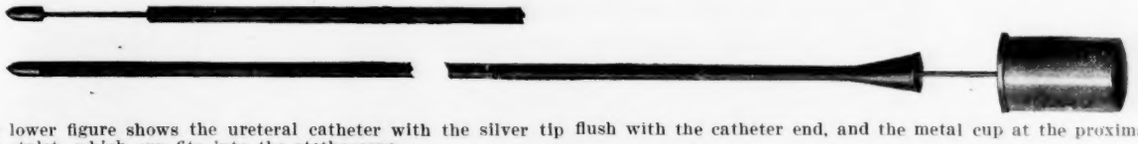
URETERAL CATHETER FOR THE DETECTION AND DISLODGMENT OF STONES

JOHN H. CUNNINGHAM, JR., M.D.
Visiting Surgeon to the Long Island Hospital, Boston; Third Assistant Visiting Surgeon, Boston City Hospital
BOSTON

Previous to the employment of the *x*-ray as a means of detection of calculi in the ureter, the error in diagnosis between stones in the kidney and ureter was great. The employment of the *x*-ray has been of the greatest value in the diagnosis. This method of diagnosis, however, contains a two-fold error: first, the impossibility of detecting pure uric acid calculi; and, second, the presence of questionable shadows in, or near by, the course of the ureter. It has been a common mistake to cut down on supposed ureteral calculi because of shadows present in *x*-ray plates, and to find no ureteral stone, the shadow being due to a faulty plate, calcified gland, sclerotic artery, phlebolith, calcified bodies in muscle or fascia, or accentuated calcification in the transverse processes of the vertebræ. It has been recognized that a simple *x*-ray picture is subject to these errors, at least, and to overcome this error it has been the custom of those expert in genitourinary surgery to pass styleted urethral catheters and to have the *x*-ray picture taken with the catheters in the ureters, by which means it has been possible to interpret shadows suggesting ureteral stones more accurately, as the course of the ureter is clearly defined by the shadow cast by the metal stylet, and a calculus in the ureter will be detected budding, as it were, from the stylet.

While this method of diagnosis is satisfactory, it is possible to employ it only when all the necessary apparatus is at hand.

To detect stones in the ureter without the *x*-ray, and to aid in their dislodgement, the instrument here illustrated is of value. It consists of a ureteral catheter with an opening at the tip through which a manganese stylet is passed. On the distal end of the stylet is soldered a silver conical-shaped tip, the proximal end of which is concave, and of the circumference of the ureteral catheter, so that it fits perfectly over the opening. On the proximal end of the stylet is soldered a metal cup which may be fitted into a stethoscope. By the passage of this catheter into a ureter containing a calculus an impulse is carried to the ear as the metal tip strikes the foreign body. The catheter being marked off in inches, it is known exactly what distance the stone is from the ureteral mouth.



The lower figure shows the ureteral catheter with the silver tip flush with the catheter end, and the metal cup at the proximal end of the stylet, which cup fits into the stethoscope.
The upper figure shows the silver tip advanced in position to be withdrawn after the catheter has passed a ureteral stone. It is hoped that the concave shelf at the base of the conical tip will engage the ureteral calculus enough to dislodge it, and allow it to pass on into the bladder after the catheter is removed.

The second object of this catheter is to aid in the dislodgment of the calculus if detected. It is well known that the ureteral catheter will usually pass any calculus in the ureter, and it has been observed many times that the stone is often dislodged following the removal of the ureter catheter. This is probably due to the fact that the stone is only lightly held in the ureter, and the dilation produced by the passage of the catheter by it may result in sufficient dilatation to allow the stone to pass on after the catheter is removed. This, however, does not always take place, and with the idea of increasing the possibility of dislodging the stone, the conical end of the stylet is advanced for about one inch, after the catheter has passed the stone, and then, the catheter being withdrawn, the shelf on the conical end may engage the stone and dislodge it.

829 Boylston Street.

Medical Inspection Prevents Caisson Disease.—The engineers who built the Cortlandt street tunnel below the Hudson river are justly proud, says the *Scientific American*, of the fact that the whole 5,900 feet of pneumatic work was driven through without the serious injury, through air pressure, of a single workman. The tunnel was built under air pressure of from 25 to 35 pounds to the square inch, and the enviable freedom of the workmen from attacks of the "bends" was due mainly to a searching medical examination of all candidates for the compressed-air work.

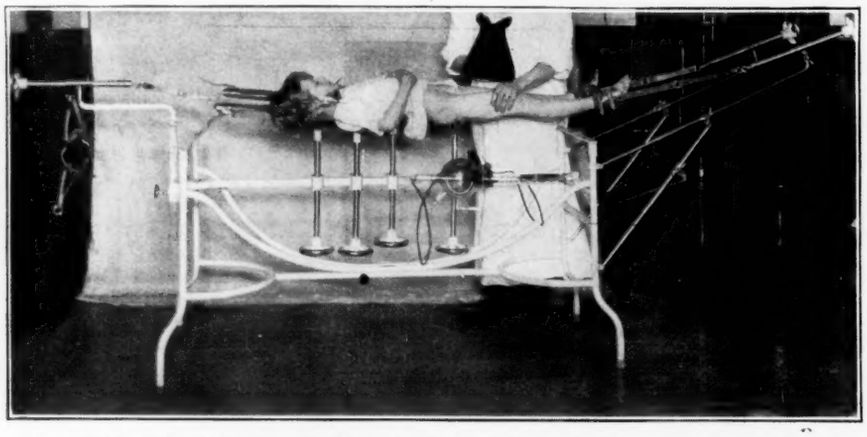
AN IDEAL ARRANGEMENT FOR THE TREATMENT OF FEMORAL FRACTURES

EDWARD A. RICH, M.D.
TACOMA, WASH.

The accompanying illustration shows a practical and exceedingly satisfactory arrangement for the treatment of fractures of the femur. Hammerstein's extension table is made use of to fix the patient's body and limbs; an *x*-ray tube suspended on an adjustable cross-bar of the table is connected with the coil. An assistant can increase or decrease the amount of extension by a turn of the screw attachment, as can he also control the amount of abduction or adduction.

The operator thus equipped can make frequent use of the fluoroscope during his manipulations and all guesswork is positively eliminated. When perfect position is secured there is no hindrance to the application of splints. Should plaster-of-paris casings be used we have the same unobstructed freedom as when applying spicas for tubercular hips. I use internal plaster splints and external splints of the same material, reaching from the axilla to the external malleolus with a steel rod incorporated for extension on the foot. When the splint is properly applied and secures muscular immobilization there is no reason why the bony fragments should be displaced.

The last three femoral fractures that have been referred to me were difficult cases, all of the patients having suffered breaks in the region of the surgical neck. The three after this method of illuminated reduction and immobilization were taken from my operating room to their homes in conveyances. Later radiographs show splendid results.



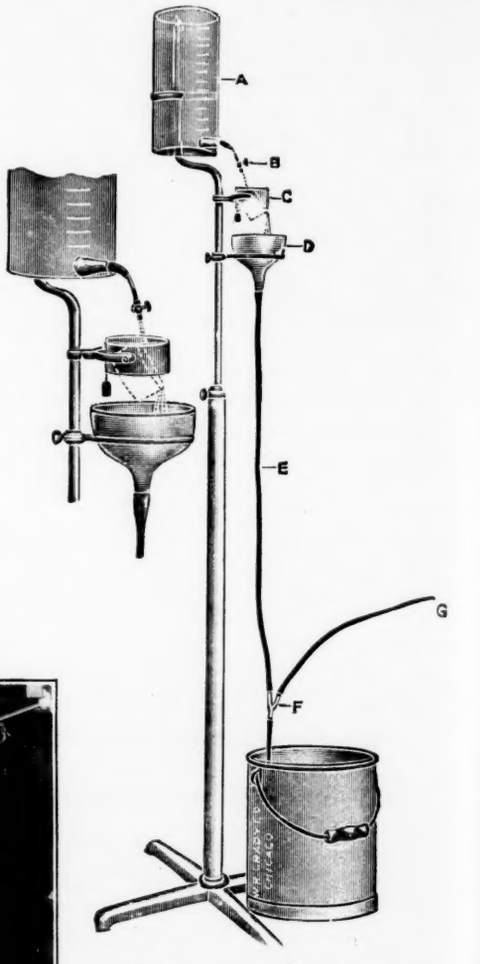
Extension table with *x*-ray attachment for the treatment of femoral fractures by the illuminated method. Note the unobstructed field for application of immobilizing splints; also mode of applying extension and abduction, and case of positive reduction.

NEW APPARATUS FOR COMPLETE DRAINAGE OF THE BLADDER FOLLOWING EITHER SUPRAPUBIC OR PERINEAL CYSTOTOMY

LEWIS WINE BREMERMAN, A.M., M.D.
CHICAGO

Having had considerable difficulty in draining the bladder after cystotomy with the ordinary apparatus, I devised the apparatus shown by the accompanying cut, which fulfills perfectly the purpose for which it was constructed, that of perfect drainage of the bladder.

After the patient is placed in bed the tubing is connected with a drainage tube from the bladder. The Y-shaped tube F must be below the level of the patient lying in bed; the reservoir A filled with water, the stopcock B turned on so that the water will drop slowly into the cup C, which, on being filled, tilts and empties itself into the funnel D. The water running down the long tube E into the Y-shaped tube F forms behind it a suction which causes a siphonage of the fluid in the bladder. This siphonage may be regulated to occur at any given interval by arranging the flow of water from the stopcock B which flows into the cup.



Apparatus for complete drainage of cystotomy; A, reservoir for water; B, stopcock for regulating the flow; C, cup weighted in the rear to hold in place when empty; D, funnel to catch the water when the cup tips on being filled with water; E, long tube which connects the funnel with the Y-shaped glass tube; F, Y-shaped glass tube; G, tube connecting the drainage tube from the bladder with the Y-shaped tube.

Usually the first twelve hours following the operation I regulate the flow so that the cup will tilt every five minutes, which is sufficiently often to keep the bladder perfectly dry. During the second twelve hours I arrange the flow so that the cup tilts about every ten minutes; during the second twenty-four hours, about every fifteen minutes.

I find this apparatus of exceptional value, particularly after prostatectomies, in which perfect drainage is exceedingly essential. Complete drainage of the bladder causes the patient to be comfortable and free from pain,

whereas if the bladder is not drained completely and is allowed to fill, the distention is accompanied with considerable pain and discomfort to the patient.

I am sure that those who are doing much bladder work have met with the same difficulties in perfect drainage as I have met with in my work, and that if they will take the occasion to use the apparatus which I have devised they will be satisfied with the results.

72 Madison Street.

WOUND CLOSURE WITH A MINIMUM SCAR *

H. EDWARD CASTLE, M.D.
SAN FRANCISCO

This subject is ever interesting, as the scar which remains is a constant reminder to patient and surgeon of an important event in a human life. It is the one thing that remains uppermost in the mind of the patient long after the disease for which the operation was performed is forgotten. In exposed parts, especially neck and face, an unsighty scar is embarrassing.

There are two essential factors in the production of a minimum scar, viz.: asepsis and the proper coaptation of tissues. The former is impossible, the latter is rapidly being perfected. The older method of interrupted sutures which was devised with the thought in mind that if one suture gave way, owing to sloughing, the remainder might hold, has largely been replaced by the continuous. The right-angle subcuticular suture is an excellent one for closing the skin and is the one now in general use.

After experimenting on dogs, Dr. Ryfkogel and I have put into use, in the former's clinic and in our private work, the following method for closing wounds. For example, in the closure of a laparotomy wound, the peritoneum is closed with No. 00 iodized catgut, the serous surfaces being approximated by a right-angle suture. One, two or three silkworm-gut tension sutures are placed through the remainder of the abdominal wall and left untied. The muscles are drawn together by No. 00 iodized catgut, and the fascia either overlapped according to Moynihan, or the raw edges approximated with No. 1 chromic catgut. The space between muscle and skin is obliterated, as the case requires, with No. 00 iodized catgut. A similar suture is run close to the skin, which is closed by a continuous suture of china-bead silk carried by a No. 16 embroidery needle. The stitches are placed nearly two- thirds of a centimeter apart and include nearly one millimeter of the edge of the skin in their grasp. A collodion strip is placed over the wound and the tension sutures are tied over a bolster of plain gauze.

The apposition of the skin is almost perfect, there being no spaces left in which blood clots may form. The wound is inspected within three days. When the sutures have served their purpose they can be wiped off with a dry sponge, leaving an almost invisible scar.

We have not attempted to keep any record of these cases, but so far there has not been one bad result.

1871 Sutter Street.

* From the Research Laboratory of the University of California.

Syphilis of the Upper Air Passages.—W. A. Lieven (*Journal of Laryngology*, March) states that tertiary processes in the larynx require energetic general treatment as there is a marked tendency to cicatricial narrowing of the larynx in these cases.

Therapeutics

ACUTE CHOREA

Although there is nothing new in our knowledge of the best treatment of this disease, it may be well to rehearse our present understanding of chorea, as well presented by Charles H. Scribner, Patterson, N. J., in the *Journal of the Medical Society of New Jersey*, February, 1909.

The pathologic disturbance which causes the muscular movements which are termed chorea seems to be principally located in the brain, and the great variety of movements and their generalization in severe cases of chorea show that there are irritations in various parts of the cerebral cortex and basal ganglia. The symptoms referable to cerebral irritations are, besides the muscular movements, mental irritability, sleeplessness, troublesome dreams, night terrors, impaired memory, and various hallucinations of sight, taste, and smell. Besides anemia and disturbed menstruation in young girls, often amenorrhea, a most frequent complication is endocarditis.

It is probable that chorea is due to an infection, and this infection is doubtless closely associated with the micro-organisms that cause acute inflammatory rheumatism. There is no reason to believe that the disease of chorea is contagious, but neither is rheumatism. Still, it is wise to isolate a child, not only for its own sake, but on account of other children involuntarily mimicking the movements of the patient, and imitative chorea is an accepted condition.

The earlier the patient is taken from school and put to bed in good hygienic surroundings, or, if the case is very mild, taken where, with the least exertion, noise and confusion, he or she may have the most fresh air and sunlight, the less likely is the chorea to be severe.

The success of any medicinal treatment must be judged by the accepted fact that chorea is self-limited, and the intensity of the symptoms will abate in from two to four weeks. Arsenic, in the form of Fowler's solution, the dose being increased by one minim a day until the full physiologic effects are obtained, is the treatment that is most lauded and many times apparently the most successful. On the other hand, it often fails, and it is possible that in the many mild cases in which it apparently succeeds it is successful only because the disease is self-limited. Doubtless many cases of neuritis and blood deterioration have followed in the steps of chorea because too much arsenic has been used, and it certainly does not seem advisable, in a disease that is apparently self-limited, to give a poison in sufficient amount to produce poisoning to attempt to shorten the disease. Scribner says that as soon as the lids become puffy, or gastrointestinal symptoms develop, the dose should be decreased again to the starting point.

To reiterate, it does not seem advisable to use a drug so foreign to the system as arsenic to the point of serious symptoms (and it should be remembered that when puffing occurs under the eyes from arsenic there is also generally albumin in the urine). When, during its administration, choreic movements cease, it is by the self-limitation of the disease, or by the arsenic causing some debility of the nerves, if not an actual neuritis.

Scribner states that antipyrin is one of the most valuable of drugs in lessening muscular activity and easing the pains that may be present in the muscles and joints. This drug is valuable in relieving muscular contrac-

tions, but must be given in good doses and not continued too long, and if during its action the heart is protected with small doses of digitalis it certainly is not any more dangerous a treatment than is arsenic.

The salicylates and salol (the latter in small doses) are as valuable in chorea as is arsenic, and they would certainly seem indicated when there are painful and swollen joints, as frequently occurs in chorea.

If the movements from the disease are so severe as to cause injury to the patient, or even to endanger life from continuous sleeplessness, Scribner advises the chloral treatment. Chloral for this purpose, according to Forchheimer, "is given in five-grain doses every four hours the first day, and two and one-half grains are added to each dose the second day, and these second-day doses are repeated on the third day until the proper effect is produced. This means that the patient should be kept asleep until the choreic movements have ceased for about twelve hours." The amount of chloral administered on this plan sometimes may be enormous, considering that it is a child that is generally being treated. Of course the heart should be carefully watched, but it generally withstands the treatment well. Forchheimer states that, in his experience, "this treatment has always resulted in one of two ways: either the child wakes up cured (i. e., without any form of chorea), or the grave form has been converted into the mild form."

Scribner says that the extreme danger to life of the severe form of the disease, and the really wonderful results of the chloral treatment, justify the risk.

HEADACHE

Of all painful conditions this is the most frequent and the one that is the least tolerated; hence the nostrums for its treatment are legion.

It should be the aim of the physician to make a diagnosis of the cause of a headache. The acute headaches occurring in feverish processes may be due to increased temperature and the increased rapidity of the heart causing an actual increased cerebral pressure, or may be due to a toxemia from the products of infection. Anything that reduces the temperature, lowers the blood pressure, and cleanses the intestines of feces, products of fermentation, putrefaction, and old bile, will relieve this kind of a headache.

If the headache is due to cerebral hyperemia without fever, anything that will relieve the blood pressure, as dilating the peripheral blood vessels, or putting the feet into a hot bath, will be efficient treatment.

If the headache is due to cerebral excitement (often perhaps caused by an increased blood pressure), it will be relieved by anything that lessens cerebral activity, as bromids and chloral.

If the headache is due to venous congestion, as from cardiac insufficiency or from arteriosclerosis, nitroglycerin by dilating the superficial blood vessels may be expected to relieve the headache. Posture and the addition of another pillow at night will often relieve this headache. If, with cardiac insufficiency, there is headache when the patient is up and about, digitalis may relieve it.

Headache may also be due to anemia and low blood pressure, as in neurasthenia. In these conditions a slight serous exudate may occur at night in the brain similar to that which occurs in the extremities during the day. Such headaches are relieved by iron, sometimes by vasoconstrictors, and at times by calcium.

The most frequent causes of toxic headache are constipation, intestinal fermentation, kidney insufficiency and liver insufficiency. In the first instance free daily movements of the bowels, and such dietetic and medicinal treatment as to prevent fermentation will also prevent the headaches. In kidney or liver insufficiency the diet should be so arranged as to allow the easiest metabolism and the most perfect elimination of waste products, and the headache will be less.

Actual inflammation of the meninges of the brain is, of course, the cause of intense headache. Such headache can only be combated by narcotics and the inhibition of the inflammation. If the pressure from the products of inflammation or exudation becomes sufficient to allow of draining by spinal puncture, this may relieve the headache, even if there is not sufficient fluid to cause coma.

The persistent headache from a cerebral tumor can only be cured by the removal of the tumor, or, perhaps, by trephining and thus relieving cerebral pressure.

The headaches of post-epileptic attacks may be due to a slight exudate in the ventricles of the brain, or to a congestion of the meninges, and will generally be relieved by bromids.

The terrible, typical migraine attacks are also perhaps due to toxic irritants circulating in the blood much as are the unexplained epileptic attacks. Such headaches are relieved only by stronger narcotics and time. Such attacks, as well as epileptic fits, may be prevented by the most perfect possible regulation of the stomach and intestines and such modification of the diet as will prevent the formation and absorption of toxins.

The post-alcohol and post-ether headaches are probably due to exudates into the cerebral cavities, and the toning up of the circulatory system with ergot, digitalis and strychnin would seem to be the best treatment.

Of all causes of headache far and away the most frequent is eye-strain. While there are a few enthusiasts who go too far with the eye reflex theory as a cause of many nervous disturbances, and while it is not necessary under the discussion of headaches to prove or disprove or defend other reflexes that may occur from eye tire, it is a positive, incontrovertible fact that defective eyes cause more headaches than all other causes put together. Unfortunately, if this cause is not corrected early in life before the headache habit has been acquired, the human neurotic mechanism so readily develops a nervous habit that the headaches recur throughout life.

It is not to be understood for one moment that a headache should be considered ocular unless all other more serious causes have been excluded. Such causes having been excluded, a careful consideration of when, how and why the patient has headaches should so impress the investigator with the probability of ocular defect that he should insist on his patient consulting an oculist before allowing him to become a chronic headache sufferer, or to seek help from physician to physician, or to take "patent medicines" for relief. The eyes of such patients should be carefully examined and ocular defects found or excluded.

It should be carefully impressed on the patient that if an ocular defect is found, and if apparently the right lenses are given him, that, in the first place, the decision of the exact ocular defect, even by the best ophthalmologists, is not absolute, and that it is no more an exact science than is internal medicine, and that an eye

showing a defect to-day may show a different defect a few months or even a few weeks hence. The patient ought also to understand that he should have the prescription for lenses put up, and then have the lenses adjusted to his eyes by the very best optician he can find. He should also be told, if he has astigmatism, that the least bending of the frames of his glasses or spectacles will not only make the correction *nil*, but perhaps cause more eye pain and headache than he had before. Hence astigmatic lenses should be frequently straightened by the optician. The patient should also be told that however perfectly his lenses fit his eyes now, a year or more hence they may not fit at all. Consequently, careful examination of a patient with headaches having proved to both the physician and the consulting oculist that the trouble is due to eyestrain, should cause that patient to remember that it is the oculist to whom he should look for the cure of a recurrence of his headaches.

Considerable time has been spent in discussing the prevention of eye headaches for the reason that eyestrain is the most frequent cause of headaches, and their treatment by the laity is making weak hearts; and weak general circulation is becoming the bane of the treatment by medical men of all acute disease or post-operation conditions. This is due largely to the fact that civilized people frequently take large amounts, or repeatedly take small amounts, of coal-tar antineuralgic drugs, and the most frequent cause for the taking of such drugs is headache. Consequently, anything that will prevent frequent headaches will prevent many unnecessary deaths. The amount of acetanilid, antipyrin, and now phenacetin (acetphenetidinum) that is consumed in this country is enormous, mostly through the medium of nostrums, especially headache powders and tablets. Though the pure food and drug law now compels the proper labeling of such products, the laity still does not understand the dangers from these drugs, or their pernicious action on the heart and blood. From an ordinary dose death does not often occur, but, unfortunately, the deteriorating action on the blood and circulation from these drugs goes on unrecognized, and they have now become the most frequent cause of anemia, neurasthenia and general circulatory debility in this country to-day.

It is hardly necessary to mention the reflex head pain that may come from a bad tooth, from an inflammation in the antrum of Highmore or the frontal sinus, or from inflammations in the ear, as these diagnoses of causes of headache should be readily excluded.

It should be remembered that frontal headache is frequently caused by syphilis.

It should also be remembered, if there is insufficient pulmonary ability, whether from tuberculosis, emphysema, pleurisy with effusion, or asthma, that this lack of proper aeration may cause headache.

At times gastric hyperacidity and uterine displacements may be reflex causes of headache, but such causes are rare.

The wearing of heavy hats and heavy masses of hair may be the cause of headaches in girls and young women, to say nothing of the pernicious spotted veil.

MALIGNANT GROWTHS

Although we can not yet declare the exact method by which mercury inhibits the activity of the germ of syphilis, nor exactly how it removes or causes absorption of small-celled specific growths, it is a well-known fact that mercury has the power not only to do this, but if long enough administered, can prevent syphilitic recurrences.

Dr. Bucher, Fort Lyons, Colo., has recently declared that small doses of mercury have greatly improved patients with tuberculous laryngitis, and improved tuberculous infiltrations of the lungs. The mercury in these tuberculous cases is given subcutaneously. This, then, would seem to indicate that at times mercury may remove a small-celled infiltration that is tuberculous.

Now Dr. William L. Harris, Providence, R. I. (*New York Medical Journal*, Feb. 27, 1909), states that for more than four years he has been using mercury hypodermatically to remove carcinomatous growths and infiltrations, and with apparent success. Such treatment is not instead of operative treatment, but as an adjunct to operative treatment. He considers that the treatment should extend over two or three years, and that the earlier it is begun the better. "For two months after operation for carcinoma" he "injects hypodermatically 1/2 grain of a soluble iron salt and 1/24 grain of arsenous acid." He also "administers subcutaneously 2 1/2 grains of salicylate of mercury, and repeats this every ten days for four times; then he administers 1/2 grain or 1 grain every fifteen or twenty days for the first year." In the second year he "administers 1 grain of the mercury every ten days until 10 grains have been taken, and then 1/2 grain once a month." He states that lately he has been using "the succinimid of mercury in 1/5 grain doses, subcutaneously, administering this dose every five or ten days for ten doses, and then every fifteen or twenty days." The iron and arsenic injections he states he gives from time to time as a tonic.

He is very careful not to give the arsenic frequently enough or in a dose sufficient to cause salivation, and therefore watches each patient carefully. He also would not use it in an anemic patient, and during its administration frequently counts the red blood corpuscles to note the condition of the blood. He thinks that the combined iron and arsenic treatment is beneficial both to the patient and to the best action of the mercury.

Harris believes that this mercury treatment is inhibitory to the cancer germ or to cell proliferation.

Harris does not state why he thinks that iron and arsenic are more beneficial when administered hypodermatically than when given by the stomach. There certainly seems to be, many times, an advantage in administering mercury subcutaneously rather than by the mouth or by inunction, but if mercury is beneficial in carcinomatous conditions it would probably also be of benefit when given by the mouth. In any case, the experimental dose of mercury for the treatment of cancer would be small.

Carcinosarcoma of the Ovaries.—Forssner, in *Hygica Festband*, adds two new cases of this rare form of tumor to the small number already recorded in the literature, in all not more than eight or ten. Whether the tumor develops as a mixed one from the beginning or whether a carcinoma and a sarcoma originate independently and perhaps subsequently coalesce, in either case the different tumor tissues present the same characteristics as ordinarily observed on part of the tumors when occurring in the uterus independently; thus the carcinoma in the case is either a so-called malignant adenoma or a adenocarcinoma and the sarcoma tissue may be either round, spindle or giant-celled.

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SATURDAY, APRIL 24, 1909

ADVANCES IN KNOWLEDGE OF INFECTIOUS ENDOCARDITIS

Infectious endocarditis presents problems of great interest to the student of infections. First there is that much discussed but still unsettled question: Why is the left side involved so much oftener than the right? And then, in the cases that run a more protracted course, the problems of the complicated mechanisms whereby a focus of infection in the middle of the blood stream is permitted to maintain itself for so long a time naturally press forward for some attempt at solution. In connection with these and other phases of infectious endocarditis the results of the investigations of Rosenow[1] merit special notice.

In the first place, Rosenow, on the basis of a considerable experience, emphasizes strongly the diagnostic value of blood cultures, especially in the early stages of infectious endocarditis. Blood cultures may serve not only to establish the existence of endocarditis, but also the etiologic nature of the process. Blood-agar is recommended as more likely to give growth than broth, especially in pneumococcus endocarditis, and because of the additional advantage that the number of colonies which develop may be made use of to estimate the number of bacteria in the blood from time to time.

Most of the cases of endocarditis studied by Rosenow were caused by pneumococci. One was caused by a staphylococcus. When first isolated from the blood these bacteria presented certain special and peculiar characteristics which soon were lost on artificial cultivation, namely the faculty of adhering firmly to solid surfaces and of growing in clumps, especially in the presence of oxygen. When still possessed of this property they readily caused endocarditis in rabbits on injection of large quantities, even though no experimental injury was first inflicted on the valves or other parts of the endocardium. Simultaneously with the loss of the peculiar cultural characteristics the bacteria also lost the power to localize on the endocardium and to produce changes there. In some instances, the experimental endocarditis was progressive, but in many cases more or less healing took place. Rosenow is inclined to see in the peculiar characteristics of the bacteria in question an explanation in the first place of their power to produce endocarditis (especially of course in the rabbits) and then also of the greater frequency of involvement of the left side because the adhesive tendency is more pronounced in the presence of oxygen. The fact that the special characteristics were readily lost raises the question whether they were not acquired during the growth on the endocardium and in the blood of the patient—in other words a result rather than a cause of endocarditis. Nevertheless, the readiness with which endocarditis could be produced experimentally so long as the special characteristics were retained certainly indicates the importance these properties may have in leading to localization on the endocardium.

On isolation from the blood and, in some of the cases, from the endocardium after death, the pneumococci were of only minimal virulence for rabbits, and as would be expected in view of this fact, freely susceptible to phagocytosis by human and other leucocytes in the presence of serum. When pneumococci are isolated from the blood of pneumonia patients they are virulent for rabbits and insusceptible of phagocytosis by normal leucocytes in normal serum. There consequently exists a profound difference in the strains from each of these two diseases and the question naturally comes up: How can apparently avirulent pneumococci exist in the blood and cause endocarditis and the other lesions? Rosenow's attempts to analyze the mechanism of immunization of the pneumococci against the antibodies of the patient give results that are highly interesting. He found that not only did the pneumococci grow better in serum of the patients from whom they were obtained than in normal serum, but that they also possessed a distinct power to resist phagocytosis by the patient's leucocytes. This immunity of the pneumococci seems to have been limited strictly to the blood of the patient in whom they had existed—a remarkably specific adaptation. Furthermore, while normal leucocytes in the patient's serum and patient's leucocytes in normal serum would cause active destruction of the pneumococci, the patient's leucocytes in the patient's serum might not cause any destruction. Growth of pneumococci in the patient's serum would render them more resistant to phagocytosis than growth in normal serum. The acquirement of this resistance to phagocytosis appears to be closely dependent on some heat-sensitive property of the serum, because when grown in heated serum the cocci remained susceptible to phagocytosis. In other words, pneumococci under certain circumstances immunize themselves against the antibodies of the host, and as this immunity is limited strictly to the antibodies of the individual host we seem to stand here before an adaptation of remarkably narrow specificness. This, then, may be the explanation of the fact that apparently avirulent bacteria may maintain existence for months in the blood and heart of the endocarditis patient and sus-

1. THE JOURNAL A.M.A., Nov. 7, 1908, p. 1571; Jour. Infect. Dis., 1909, vi, 245.

tain a more or less active endocarditic process—the bacteria become immune to the antibacterial substances of the particular patient.

Finally, notice should be taken of the fact that in Rosenow's cases the therapeutic injection of dead bacteria had no influence on the course of the disease.

The discovery of the peculiar adhesive tendency of certain bacteria when freshly isolated from cases of endocarditis and the immunity of such bacteria to the anti-infectious powers of the patient's blood, constitute important additions to our knowledge of the pathogenesis of endocarditis and to the rôle of adaptation of bacteria in maintaining infection.

TYPHOID FEVER AND MECHANICAL FILTERS

As is well known, there are two principal methods in use in this country for purifying public water supplies. The older of these is the slow sand filtration method practiced for many years in England, Holland and Germany, and long proved to be an efficient safeguard against water-borne infections. When this system is employed with relatively clear waters the difficulty and expense of operation, due largely to the frequent scraping-off of the surface layer of sand, are not great, but if a very turbid water has to be treated the rapid clogging that results makes the filter practically unworkable. Muddy waters, therefore, are usually clarified by the addition of suitable chemicals, such as aluminum sulphate. Many special forms of apparatus for this purpose have been devised and are in use in different parts of the United States. They all agree in providing for mixing the chemicals with the water in proper proportion and then, after a more or less complete settling process for passing the water at a relatively rapid rate (*e. g.* 125,000,000 gallons daily) through beds of sand arranged so as to be conveniently cleaned by back-flushing. Various mechanical appliances are used in effecting these results and the name mechanical filter is commonly applied to this type of apparatus.

While the principles of construction and operation of the slow sand filters have been well worked out, and beneficial results from their installation have been generally noticed, the newer mechanical filters are, so to speak, still on trial, particularly as regards the conditions that determine their sanitary efficiency. Some sanitarians have been disposed for this reason to oppose the introduction of mechanical filters and to advocate on all occasions the installation of slow sand filters. Since it has been abundantly demonstrated that the latter type is not at all adapted to the treatment of the highly turbid surface waters common in many parts of the United States, a more rational attitude would seem to be to watch closely the operation and effects of the mechanical filters perforce installed in many places and learn how to avoid or overcome the weaknesses inherent in the system.

One of the anticipated difficulties in the management of the mechanical filters has been the estimation of the proper amount of coagulant that should be added under varying conditions. If this matter is left to inexpert or inexperienced hands, it is clear that filters operated on this principle may be very far from successful. That the possible danger from this source is not an imaginary one is shown by certain experiences with a mechanical filter at Conneaut, Ohio, recently narrated by the Ohio State Board of Health.[1] The filters at Conneaut, a city of about 9000 inhabitants, are of types that use aluminum sulphate as a coagulant. The character of the raw Lake Erie water on which these filters operate does not seem to be very bad at certain seasons, but at other times the sewage-polluted Conneaut river flows over the intake, producing a condition by no means easy to remedy. Several epidemics of typhoid have occurred at Conneaut since the filter plant was installed. The last of these, in 1906-1907, was thoroughly investigated by the Ohio State Board of Health, and evidence was secured that the water supply was the chief cause of the outbreak. It was found, further, that a connection apparently existed between the time of infection of many cases and known irregularities in the operation of the filter plant. Among the features that tended to produce poor results are enumerated improper methods of operating the filter, lack of sufficient sedimentation after addition of the coagulant, lack of sufficient filtering capacity and extremely small storage for filtered water at the plant.

The occurrence shows, first, the lack of protection against typhoid fever afforded by badly managed mechanical filters, and second, the necessity for such thorough investigation as that undertaken in Ohio. No filter can be expected to distinguish automatically between pure water and water containing typhoid bacilli.

A SANE NEWSPAPER VIEW OF ANTIVIVISECTION

We recently called attention to the awakening of the lay press in regard to a sound and well-informed knowledge on medical matters of public interest, citing as an example the admirable comment of the Philadelphia *North American*[2] on the Tuberculosis campaign. We now welcome two sane editorials in recent issues of the St. Louis *Republic* in reference to the "antivivisection" outburst. "Dr." Still, of osteopathic fame, has recently urged a law for Missouri prohibiting all animal experimentation. To this the *Republic* replies by pointing out that not so long ago, Mr. Still—not then a "doctor of osteopathy"—"appeared as a humble suppliant before a committee of the Missouri legislature to

1. Report on Water and Sewage Purification in Ohio, 1908, pp. 82-92.
2. THE JOURNAL, March 27, 1909, p. 1042.

plead for his right to follow the practice of healing according to the light of his own thought and theories, regardless of the opinions and presuppositions of others" —and got it. "This," says the *Republic,* "was hailed as a triumph of the principle of free investigation, of the right to seek the good of humanity, untrammeled by precedent and formal method."

"And now comes an effort to have the parts in the play reversed. It is Doctor—by grace of the triumph of the principle of freedom in the healing art—Doctor Still, himself, and no other, who would play camel to the M.D.'s Arab, and put the regular practitioner out of the tent because his methods do not commend themselves to Doctor Still's refined sensibilities. It is the erstwhile suppliant who would now dictate the terms on which scientific research should go on in the medical colleges and universities of Missouri!" As to the bill itself, the *Republic* aptly says: "It might fitly be termed 'an act to substitute children and their parents for dogs, cats, and mice in surgical experiments.'"

Of the antivivisection movement in general, the *Republic* says: "The antivivisectionists have broken out again. Miss Lind-af-Hageby has come clear from Sweden to assure us that she 'does not believe that there has been any decrease in deaths from diphtheria since the introduction of antitoxin,' and other things which are of like interest, as showing what a young woman, when she sets her mind to it, can contrive not to believe."

No one knows better than the conscientious scientist the power of mental predisposition, conscious or unconscious, in "contriving" belief or disbelief in facts. If he has to keep himself constantly on guard against it, how much more should even the most positive beliefs of professional agitators be received for what they are worth!

ERADICATION OF THE PLAGUE IN SAN FRANCISCO

The nation owes a debt of gratitude to San Francisco, not only for averting from the whole country an impending danger, but for affording to other cities a model of sanitary policy and execution. Ordinarily, the public, and even the medical profession, are inclined to throw the whole burden of sanitary administration on the health authorities—a fact which allows politics to place in power an inefficient health board or hamper and neutralize the efforts of a capable one. While in her dealings with the first epidemic, San Francisco allowed politics to exert a baneful influence, in the last one the united and awakened community presents the spectacle of politics replaced by enlightened statesmanship; thus she has eradicated from her limits bubonic plague, which threatened to decimate not only a single city but the entire country.

The story is well told in the lately published report of the Citizens' Health Committee, and it is universally acknowledged that the result was largely due to the wisdom and tact of Passed Assistant-Surgeon Rupert Blue, in command of the federal sanitary administration at San Francisco. The experience of the city demonstrated two things very clearly: first, the efficiency of the United States Public Health and Marine-Hospital Service in emergencies of this kind; and second, the value of the cooperation of the lay public. Previous to the outbreak of this epidemic the most erroneous notions prevailed regarding the plague. It was said to be a disease affecting orientals only, a filth disease, one due to vegetarianism, a disease which had always existed in Asia but need not be feared in America.

The first epidemic was confined to Chinatown and was eradicated by rat-proof building. The outbreak of the recent epidemic was from several foci and the striking fact was ascertained that practically the only part of the city exempt was Chinatown. The disease affected Americans of the middle class, among whom reasonable cleanliness prevailed, and the mortality, although smaller than among the orientals, was sufficiently appalling, viz., 48 per cent.

The work of eradication was a war on the rat. This demanded the starving, poisoning, trapping, and destruction by other methods, of at least 2,000,000 rats. In order to make the work effective, it was necessary to enlist the cooperation of all classes of the community in making garbage and food supplies rat-proof as well as in the actual capture of the rodents. Not only employers, tradesmen, restaurant keepers, butchers, grocers, teamsters, householders, but even school children were pressed into service to rid the city of rats. Everyone was incited to clean up his own premises and to see that his neighbor did the same. Not only were plague-bearing rats hunted out and killed, but an immense amount of work was done in laying concrete sidewalks and foundations, which with other forms of rat-proof building gives reason to hope that the plague will not again gain a foothold in the city.

The investigations of the health authorities showed that the plague among rats continued and even increased after the human cases had disappeared. This fact renders it advisable that rats should be periodically examined for the plague, so that the slightest evidence of recurrence among animals may be met by prompt and energetic measures to suppress the epizootic.

The example of San Francisco should lead other municipalities to meet their sanitary problems in the same united and determined way. Especially the seaports should remember that the introduction of plague is an ever-present danger which should be warded off by efficient measures against rats.

JAPAN, AND OPIUM IN CHINA

We have heard much in late years of the efforts of the government of Japan to keep opium out of that country, and it would indeed appear that it is meeting with praiseworthy success in the endeavor. The Japan-

ese do not seem, however, so anxious to prevent the Chinese from suffering from the evil; according to one writer, Mr. John Stuart Thomson,[1] who seems to speak by the card, they are flooding China with cheap hypodermic syringes and encouraging the morphin habit in that land while discouraging it in their own. It is reported that they are reducing the number of opium-smokers in Formosa, but Mr. Thomson says that they do not apparently look with as much concern on the growth of the habit as does the Chinese government, for in one month alone of this year 30,000 new licenses, at 30 sen each, "good for life," were issued to Formosans. This probably means that, while the intentions of the Japanese government may be good, it has not yet carried any legislation so far as to check the unscrupulous commercial instincts of some of their people. It will be one of the good results of the Shanghai conference if the resolutions there adopted can be honestly accepted and given the force of laws by Japan as well as the other powers.

THE HOMES COMMISSION REPORTS

Several times recently we have commented on the valuable and interesting data collected by the President's Homes Commission and published in its official reports. These reports, it will be remembered, compose the document whose transmission through the mails one of the United States senators tried to have prohibited. As we remarked at the time the immediate result of this action was to cause the document rooms of the House and Senate to be stripped of the reports, many of those who had access to them at once hastening to obtain what was fondly imagined to be a salacious morsel. Of course, no material of this sort is contained in the reports; they do contain, however, a vast amount of information very damaging to "patent medicine" and other equally vicious "interests." Whether this fact bears any relation to the attempt made to refuse mailing privileges to the document, can only be surmised. In any case the attempted suppression has been partly successful. A number of physicians have written us that their senators have been unable to furnish them with copies as the supply is exhausted. It is of interest to learn, however, that a limited number of copies are held for distribution by the commission itself.[2]

PRACTICAL EXAMINATIONS FOR THE MEDICAL LICENSE

An important step recently taken that will have a tendency to raise the standards of medical education is the inauguration of the practical examination by two state examining boards, those of Ohio and Massachusetts. During the written examination, in June, in Ohio, each of the one hundred and sixty-one applicants was called on, in the presence of the entire class, to make a urinalysis and to identify under the microscope histologic, pathologic and bacterial specimens. It required about 50 minutes for each applicant to complete the practical test; he was then given an extension of time to finish his written examination. The results were reported as highly satisfactory. The Massachusetts board required each applicant to give a demonstration on the obstetric manikin and to make a urinalysis, as well as to identify specimens under the microscope. It was stated that many who took these practical tests seemed totally unfamiliar with the microscope. The board proposes in its future examinations to require also the use of the stethoscope as well as demonstrations on the cadaver and the application of bandages and surgical dressings. It has recently been announced that within the next few months the boards of Minnesota and Indiana will require, in addition to the written examination, practical tests in histology, pathology, bacteriology and urinalysis. These practical tests have long been required in the medical license examinations in other countries. Their requirement by state licensing boards in this country is, indeed, most important and timely. They enable the boards readily to differentiate the applicant who has undergone merely a cramming process by "quiz-compend" methods from one who has had training in practical laboratory and clinical work. Since the necessary apparatus and material for making these tests are so easily obtained, it is hoped that many state boards will soon require them as a part of the license examination.

1. World To-Day, April.
2. Physicians desiring copies of the report should address the "President's Homes Commission, 923 H street, Washington, D. C.," enclosing 19 cents to cover cost of mailing.

Medical News

ALABAMA

Commencement.—On April 19, the commencement exercises of Birmingham Medical College were held, when a class of thirty was graduated. The address of the evening was delivered by Dr. George T. McWhorter, Riverton; Dr. Benjamin L. Wyman presented the diplomas and Dr. Hogan gave the charge to the class.

Personal.—Dr. S. H. Newman, Dadeville, was thrown from his buggy in a runaway accident April 6, breaking his left leg below the knee.——Dr. Morris Henry has been elected city physician for Tuscumbia, Dr. Walter A. Maxwell for Sheffield, Dr. Charles W. Williams for Cherokee, and Dr. J. H. Masterson for Leighton by the Colbert County Medical Society.——Dr. Neal B. Sewell, Wetumpka, was painfully injured in a runaway accident, April 6.

ILLINOIS

Personal.—Dr. Samuel M. Wylie, Paxton, who has been ill for several weeks, is recuperating in Citronelle, Ala.——Dr. Laban A. Burr, Bloomington, is reported to be seriously ill with heart disease.

Cornerstone Laid.—Ceremonial arrangements have been completed for the laying of the cornerstone of St. Francis Hospital, Evanston, by Archbishop Quigley, April 25. The new building will accommodate 350 patients, and is expected to cost more than $250,000.

Labor Union Opposes Tuberculosis.—The State Federation of Labor has decided to cooperate actively in the fight to stamp out tuberculosis. Literature dealing with occupational diseases, and particularly with tuberculosis, giving full information concerning symptoms of the disease, and the work being done for its eradication, is to be distributed by the federation among the 500,000 trade union members in the state.

Chicago

Resigns from Staff.—Dr. Lucy Waite announces that she has resigned as head surgeon of the Mary Thompson Hospital and has retired from practice.

New Hospital Plans.—The new building of the Maimonides-Kosher Hospital is to be erected on a site purchased by the directors on California avenue near Fifteenth street. The building will be six stories in height and will cost more than $75,000.

Health Department "Donts."—The department of health, in the current bulletin, makes the following suggestions to the public to bring about a reduction of the cases of, and deaths from communicable diseases:

1. Don't belittle the gravity of a sore throat—call in your physician without delay.
2. Don't think that every attack of vomiting and a "breaking out" of the skin is due to overloading of the stomach—follow the same course as above.
3. Don't let the good ladies of the neighborhood diagnose what disease your child is suffering from.
4. Don't seek immunity from the observance of health regulations.
5. Don't ask your physician not to report a case of scarlet fever or diphtheria—it is his duty to do so.
6. Don't allow visitors when you have contagious disease in the house—likewise don't make visits.
7. Don't in any way try to evade, shirk or disregard any of the regulations made by the health department. They are made for your own good and for the protection of the community.
8. Don't put the well children with the sick—as is the practice in many ignorant families—so that they may catch the disease and "be over with it." It is a dangerous practice, contrary to all reason and principle, resulting in the needless sacrifice of many lives and the pitiful crippling of many that survive.
9. Don't—once more—don't allow any form of close association such as eating, playing and sleeping together of those recently recovered from a contagious disease (even for some time after the house was disinfected) with the other children who have been kept apart from the patient during the illness and who had not the disease previously.
10. Don't clamor for the premature termination of your case by the health department. When this is done it surely results in the infection of many others by those prematurely released from quarantine.

INDIANA

Condemns Insanitary School Houses.—The State Board of Health, after making sanitary surveys, has condemned 24 school houses on account of insanitary conditions.

Tent City to Be Erected.—Plans for the proposed tent city for tuberculosis patients were discussed at the meeting of the South Bend Antituberculosis Society, April 14, and an agreement was made to proceed with the scheme, and to establish three shacks at the Orphans' Home, Mishawaka, at once, and to locate others in South Bend in the very near future.

Personal.—Dr. George T. MacCoy, Columbus, has been elected president and Dr. William N. Wishard, Indianapolis, vice-president of the State Board of Health.——Dr. Marcus H. Thomas, Huntington, it is announced, has decided to give up the practice of medicine on account of ill health.——Dr. Frederick W. Sauer, Indiana Harbor, is reported to be ill with typhoid fever.

Lose Licenses.—The State Board of Medical Examination and Registration, on April 13, after hearing evidence against Dr. James M. Towey, Clinton, charged with having issued prescriptions for intoxicating liquors to be filled by druggists on Sundays and legal holidays, and after receiving his plea of guilty, is said to have revoked his license.——At the same meeting, the board declined to take up the question of reissuing the license of Dr. Charles L. Landfair, Bluffton, which was revoked when he was convicted of criminal practice.

March Sickness and Death.—During March, there were reported to the State Board of Health 3,444 deaths, or 243 more than for the correspondnig period of last year, the respective death rates being 14.8 and 13.8 per 1,000. The order of prevalence of disease was as follows: Tonsillitis, pneumonia, influenza, bronchitis, rheumatism, measles, scarlet fever, typhoid fever, whooping cough, diarrhea, intermittent fever, diphtheria, chickenpox, erysipelas, smallpox, inflammation of the bowels, dysentery, puerperal fever, cholera morbus, cerebrospinal meningitis, and cholera infantum. There were 574 deaths from pneumonia, 410 from tuberculosis, and 191 from violence during the month.

KENTUCKY

Sanitary Campaigns.—At a joint meeting of the State Board of Health and the State Federation of Woman's Clubs, held in Louisville, April 10, plans were discussed for making a general thorough inspection of the sanitary conditions of the state as they apply to general cleanliness and health, and it was urged that a more rigid, wide-reaching sanitary inspection law be passed and enforced.

Personal.—Dr. W. A. Kipp, Louisville, who has been in Central America for three years, is reported to be seriously ill with diabetes at the Deaconess Hospital, Louisville.——Dr. Joseph J. Back, Newport, and J. Frank Houston, Alexandria, while examining the mental condition of a farmer at Ten Mile, were attacked and assaulted by the patient.——Dr. John K. Wood, first assistant physician at Central Kentucky Asylum, Lakeland, who has been seriously ill, is reported to be improving.——Dr. Sidney B. Johnson, Bowling Green, was stricken with paralysis April 2, and is reported to be in a critical condition.

LOUISIANA

Tuberculosis Building Condemned.—The Shreveport Board of Health, on April 13, condemned and ordered burned the tuberculosis building of the State Charity Hospital, considering it dangerous to public health.

Hospital Enlarged.—St. Mary's Hospital and Training School for Nurses, Patterson, has recently been enlarged from a capacity of 15 to 25, and it is expected soon to further increase its capacity to 40 patients.

Parish Society Meetings.—At the annual meeting of the Calcasieu Parish Medical Society, held in Lake Charles, April 6, the following officers were elected: President, Dr. Norman S. Craig, Jennings; vice-president, Dr. Temple B. Smith, Lake Charles; secretary-treasurer, Dr. S. George Keeger, Lake Charles (re-elected), and delegates to the state society, Drs. Thomas H. Watkins, Lake Charles; Valerion A. Miller, Lake Arthur; Edward R. Gandy, West Lake, and the president.——At the last session of the Webster Parish Medical Society, held in Minden, Dr. R. Ernest Smith, Minden, was elected president; Dr. Joseph G. Gladney, Minden, vice-president, and Dr. Robert H. Johnson, Lanesville, secretary-treasurer.——At a special meeting of St. Tammany Parish Medical Society, held in Mandeville, March 31, the following officers were elected: President, Dr. George R. Tolson, Covington; vice-president, Dr. Louis M. Thomason, Mandeville; secretary, Dr. Henry E. Gautreaux, Covington; treasurer, Dr. Phau R. Outlaw, Slidell; delegate to the state society, Dr. James F. Pigott, Covington, and alternate, the president.——Physicians of Livingston Parish met in Denham Springs April 3 and organized a medical society with the following officers: Dr. Thomas B. Odom, French Settlement, president; Dr. William W. Faust, Albany, vice-president; Dr. Montgomery Williams, Denham Springs, secretary, and Dr. William H. Bridges, Weiss, treasurer.

MARYLAND

New Hospitals.—A large hospital building is to be erected for a state tuberculosis sanatorium near Sabillasville, for patients in advanced stages of the disease. It will be a frame building two and a half stories in height with wide verandas.——The new cottage for women at Springfield Hospital for the Insane, Sykesville, is almost finished and will accommodate 75 patients and cost about $30,000.

Baltimore

Deceased Doctor Rich.—More than $22,000 in coin and currency is said to have been found in the pockets of Dr. George G. Farnandis, who died April 4. He is said also to have left ground rents and other property to about the same amount.

Personal.—Dr. Victor B. Rench, for two years clinical assistant and assistant surgeon in the Baltimore Eye, Ear and Throat Charity Hospital, resumed practice in Washington, D. C., April 19.——Dr. Claude Van Bibber, who has been ill at St. Agnes Sanatorium, is convalescent and has left the city to recuperate.——Dr. G. B. Harrison has been elected resident surgeon of the Greenbrier General Hospital, Ronceverte, W. Va.——Dr. Rufus I. Cole has been elected director of the Rockefeller Institute, New York City.——Dr. Harry Friedenwald has been appointed consulting ophthalmologist; Dr. Frank D. Sanger, consulting laryngologist; Dr. Henry O. Reik, consulting otologist; and Dr. Arthur M. Shipley, consulting surgeon at the new Sydenham Hospital for Infectious Diseases.

MISSOURI

Addition to Hospital.—The work on the addition to St. John's Hospital, Joplin, will begin about May 1. The addition will cost between $30,000 and $35,000, and will increase the capacity of the institution to more than 100 beds.

Tuberculosis Camps to Be Established.—After a thorough examination of the State Penitentiary, Jefferson City, a committee of the State Board of Health has recommended the establishment of a convict tuberculosis camp on the state farm just east of the prison, where all prisoners afflicted with the disease will be quartered for treatment.

Personal.—Dr. Albert H. Cordier, Kansas City, left April 15 for Kodiak Island, Alaska, for a three months' bear hunt.——Dr. William F. Keir, St. Louis, started on a trip around the world April 12.——Drs. Frederick A. Patterson, St. Joseph,

and Harlan P. Mills, Grant City, have been appointed assistant physicians of State Hospital No. 2, St. Joseph.——Drs. William Porter, St. Louis, and Edward W. Schauffler, Kansas City, have been appointed members of the board of managers of the State Tuberculosis Sanatorium, Mount Vernon.

NEW HAMPSHIRE

Personal.—Dr. Ezra Mitchell, Lancaster, has resigned as chairman of the board of trustees of the New Hampshire Tuberculosis Sanatorium.——Dr. John M. Gile, Hanover, president of the New Hampshire Medical Society, was the guest of honor at a banquet of the Portsmouth Medical Society April 6.

Resolutions Regarding Dr. Conner.—The faculty of Dartmouth Medical School has adopted resolutions of regret at the death of their distinguished colleague, Dr. Phineas S. Conner, Cincinnati, placing on record their appreciation of his high scholarship and commanding ability as a practitioner and teacher.

Hillsboro Physicians Elect.—At the fourth annual meeting of Hillsboro County Medical Association, held in Nashua April 6, the following officers were elected: President, Dr. Eugene Wason, Milford; vice-president, Dr. John H. Gleason, Manchester; secretary-treasurer, Dr. Ella B. Atherton, Nashua; auditor, Dr. James B. Pettengill, Amherst, and delegate to the state society, Dr. Frank E. Kittredge, Nashua.

NEW YORK

Isolation Hospital.—The Buffalo Municipal Contagious Hospital Commission has decided to accept from the German Roman Catholic Orphans' Asylum land for a site for a hospital for acute communicable diseases. The plot of land is 563 by 486 feet, is located on Dodge and Best streets, and will cost $50,000.

Reception to Dr. Hopkins.—In acknowledgment of forty years of service as a member of the board of censors of Erie County Medical Society, a reception was recently tendered Dr. Henry Reed Hopkins. His important activities in the many years of practice were reviewed as follows: "State Society," Dr. Charles G. Stockton; "Medical Education," Dr. William W. Potter; "Health Legislation," Dr. Edward Clark; "Midwifery Legislation," Dr. Peter W. Van Peyman; "Protection of the Profession," Dr. Delancey Rochester; and the "Profession at Large," Dr. William C. Phelps.

Bills Signed by the Governor.—Governor Hughes has signed the Boshart bill which defines the term adulterated cream in the state agricultural law as cream containing less than 18 per cent. of milk fat to which any substance whatsoever has been added. The governor has also signed the bill amending the public health law regarding the establishment of hospitals or camps for the treatment of pulmonary tuberculosis. The new law corresponds to the recommendation of the governor in his annual message and requires that any person, corporation or municipality proposing to establish such an institution shall file a petition with the state commissioner of public health.

Contingent Fees.—It is stated that the present bill before the legislature in regard to contingent fees will not reach the root of the matter, and it is suggested that there should be some plan by which a jury shall know whether it is dealing with a contingent fee case or not. There should be a requirement to the effect that every such contract be filed with the papers in the case. On the rendering of the verdict the judge should ascertain the exact costs and fix the amount due the attorney, which in no case should exceed 25 per cent. of the recovery. Such a measure would serve to take away the temptation that now confronts "ambulance chasers" to enter into arrangements by which they get as much as 50 per cent. of the recovery and the costs, leaving the victim but a small fraction of what the jury intended that he should have.

New York City

Public Lecture Postponed.—Owing to important government business, Dr. Harvey W. Wiley, chief of the Bureau of Chemistry, Washington, D. C., has been compelled to cancel his engagement to address the Academy of Medicine, April 29, on "Drugs in Foods."

Favors New Ambulance Bill.—At a meeting of the Hospital Saturday and Sunday Association, resolutions were adopted commending the bill before the legislature to redistrict New York City and to authorize a public board of ambulance service. The association offers its cooperation whereby the hospitals of the city can be connected by telephone with a central bureau where reports can be made daily as to the number of beds vacant for the public use.

Staff House of City Hospital Opened.—Many men and women, prominent in charity work, were present at the opening of the staff house of the City Hospital on Blackwell's Island. The new building is called Janeway Hall in honor of Dr. Edward G. Janeway, who has been connected with this hospital for many years. This building cost $75,000, and has accommodations for 25 physicians. When it is occupied there will be accommodation in the hospital for 100 additional patients.

Lectures on Sanitary Science.—The last four lectures on Sanitary Science and Public Health will be as follows: April 14, "Personal Hygiene and the Hygiene of Communities," by Dr. Luther Gulick, chairman of the Playground Extension Committee, Sage Foundation, New York; April 21, "The Prevention of Alcoholism and Insanity," by Dr. Frederick Peterson, professor of psychiatry in Columbia University; April 26, "Visiting Nursing and Its Influence on the Prevention of Disease," by Dr. Richard Clark Cabot of Harvard University; and April 28, "The Influence of Education on Public Health," by Homer Folks, secretary of the State Charities Aid Association.

Plan to Economize in the Hospitals.—At a meeting of the heads of 45 hospitals in Greater New York a plan was presented by Mr. W. V. S. Thorne, former purchasing agent for the Union Pacific and Southern Pacific railroads, by which supplies for hospitals will be purchased by the same methods that were used in purchasing for railroads. Such a bureau would save the time of the various hospital officials and would supply them with samples and specifications of the goods bought. The maintenance of this agency would cost $24,000 a year, and it is estimated that there would be a saving of $161,318 annually. Before the plan can be put into operation it will be necessary to have the approval of the directors and executive committees of the hospitals. Many heads of hospitals were present at this conference and a resolution was passed favoring the plan.

NORTH CAROLINA

Physician Convicted.—Dr. J. Thomas Wright, Winston-Salem, charged on three counts with violation of the provisions of the recently enacted state prohibition law by prescribing liquor, is said to have been found guilty, but judgment was withheld and the defendant released on bonds of $200.

Personal.—Dr. Ivey G. Riddick, Youngsville, has been elected physician of the state penitentiary, Raleigh.——Dr. R. H. Stancell, Margaretsville, has been elected chairman of the board of directors of the State Hospital for the Insane, Raleigh.——Dr. Albert M. Ballard, Asheville, has been awarded the annual medal of the American Humane Association for the most notable act of kindness to horses or dogs coming to the attention of the association in 1908.

State Board of Health Meeting.—The State Board of Health held a special session in Raleigh, March 30, to transact business growing out of the recent increased appropriation made by the last legislature. Under the new law, the secretary must reside at Raleigh and devote his entire time to the public health interests. Dr. Richard H. Lewis, Raleigh, secretary of the board since 1892, resigned to take effect June 30. Dr. J. Howell Way, Waynesville, was tendered the position, but declined, as he did not wish to retire from private practice and to reside at the state capital. Dr. Watson S. Rankin, professor of pathology in the Wake Forest Medical School, was then unanimously elected secretary and executive officer of the board. His salary was fixed at $3,000. Dr. C. A. Shore was continued in the position of director of the state board's laboratory of hygiene.

PENNSYLVANIA

Medical Board Bill Fails.—After coming in contact with legislative obstructions, almost from the day it was introduced, the Herbst-Shreve single board medical bill failed by the "dropped from the calendar" channel. Mr. Shreve moved for the dropping of the bill from the calendar on account, he said, of the most pronounced opposition.

Reciprocity for Pennsylvania Physicians.—The Thompson bill, increasing the standard of the medical profession in this

state, passed the senate finally April 14. This bill was introduced in the house in case of the failure of the single examining board bill. It raises the standard to the same level as that of New York, Ohio and Maryland. This is done to permit reciprocity of licensure between these four states.

Personal.—Dr. Thomas S. Arbuthnot has been elected dean of the College of Medicine of the University of Pittsburg.——Dr. H. Ross Coover has been made a member of the board of health of Harrisburg, and Dr. John C. Hutton is said to be the nominee of the mayor for health officer.——The health board of Oil City was reorganized April 7, and Dr. Jacob P. Strayer was elected president.——Dr. Adam J. Riegel has been elected president of the Lebanon Board of Health.

Sanatorium Notes.—In order to accommodate the increasing number of patients at the White Pine Sanatorium, Mount Alto, it has been decided to erect 40 additional cottages which will give accommodation for 320 more patients, making the total capacity of the sanatorium exceed 1,000.——The health officer of Butler has served notice on the medical inspector to remove the tuberculosis dispensary from the center of the city to the outskirts, alleging that it is a menace to public health. ——The new infirmary at White Pine Sanatorium has already 100 patients, and there are now 600 patients in the institution.——The Braddock Tuberculosis Dispensary was opened March 28 with a public reception. Dr. Finlay K. Whitfield is physician in charge.

Philadelphia

Bequests.—The will of the late Charles E. Ellis bequeathes $10,000 to the Presbyterian Hospital for the endowment of a private room.——The will of the late Frank W. Hoyt contains the following provisional bequests: Samaritan Hospital, $10,000; Children's Hospital, $5,000; and Free Hospital for Poor Consumptives, $5,000.

Personal.—Dr. W. E. Nicely resigned the chief residentship of the Methodist Hospital.——Dr. Randall C. Rosenberger has been elected professor of bacteriology and hygiene in Jefferson Medical College.——Dr. Charles E. G. Shannon has been elected visiting ophthalmologist to the Seybert Home for Poor Children.——Dr. Aller G. Ellis has been elected assistant professor of pathology in Jefferson Medical College.

Water Nearly Pure.—Director Stearns' weekly statement on the efficiency of the city's filtration plants as ascertained by bacteriologic examination of the water supplied by these plants, shows that 99.59 per cent. of all bacteria has been removed from the raw water. The raw water from the Schuylkill, before passing through the filter beds, contained 72,000 bacteria per c.c., while the filtered water contained but 50 bacteria per c.c. The raw water from the Delaware contained 1,100 bacteria per c.c., while the filtered water from the same source contained but 40 bacteria per c.c.

Alumni Elect Officers.—At the annual business meeting of the Alumni Association of the Medical Department of the University of Pennsylvania, April 14, the following officers were elected: President, Dr. Richard C. Norris; honorary vice-president, Provost Clarence C. Harrison; vice-presidents, Drs. George C. Stout, Louis H. Adler Jr., and Charles P. Franklin; recording secretary, Dr. William S. Wray; corresponding secretary, Dr. Benjamin F. Stahl; treasurer, Dr. Herbert B. Carpenter; and executive committee, Drs. George D. Morton, George P. Miller, William McKeage, and John J. Gilbride.

RHODE ISLAND

Optometry Bill Denounced.—The bill regulating the practice of optometry, now before the general assembly, was denounced at the regular quarterly meeting of the Rhode Island Medical Society, March 4, and the members of the legislature were urged to fight against its passage.

Hospital Staff Increased.—Four assistant surgeons have been added to the staff of the Rhode Island Hospital, Providence: Drs. George A. Matteson, George W. Gardner, Charles E. Hawkes and Henry J. Hoye. Drs. Joseph C. O'Connell, Albert A. Barrows and John B. Ferguson have been appointed surgeons to the out-patient department of the institution.

Society Meetings.—At the annual meeting of Pawtucket Medical Society, held March 18, the following officers were elected: President, Dr. Bernard L. Towle, Pawtucket; vice-president, Dr. Byron U. Richards, Pawtucket; secretary, Dr. Adolph R. V. Fenwick, Central Falls; treasurer, Dr. Michael A. Ford, Pawtucket; councilor, Dr. Augustine A. Mann, Central Falls; delegates to the State Medical Society, Drs. Charles A. Stearns, and William F. A. Gillian, Pawtucket, and member of the standing committee, Dr. John A. Remington, Central Falls.——Newport Medical Society, at its annual meeting, elected the following officers: President, Dr. S. Parker Cottrell; vice-presidents, Drs. William S. Sherman and Michael H. Sullivan; secretary, Dr. Mary E. Baldwin, and treasurer, Dr. Douglas P. A. Jacoby.——The following officers were elected at the annual meeting of the Westerly Physicians' Association: President, Dr. John L. May; vice-president, Dr. Harold D. Kenyon; secretary, Dr. William A. Hillard; treasurer, Dr. C. Grant Savage, and censors, Drs. Edwin R. Lewis, J. Howard Morgan and Samuel C. Webster.——Washington County Medical Society, at its annual meeting held in Westerly, January 14, elected the following officers: Dr. Michael H. Scanlon, Westerly, president; Drs. Frank C. Pagan, Westerly, and Edward E. Kenyon, Usquepaugh, vice-presidents; and Dr. J. Howard Morgan, Westerly, secretary-treasurer.

GENERAL NEWS AND COMMENTS

The Carroll Fund.—The following contributions to the Carroll fund have been received and have not yet been acknowledged in THE JOURNAL:

Previously reported	$2,808.95
Dr. D. C. Strong, San Bernardino, Cal.	5.00
Rockland County Medical Society, Nannet, N. Y.	34.00
Dr. R. E. Bering, Tulare, Cal.	1.25
Dr. Jno. B. Rosson, Tulare, Cal.	1.25
Dr. A. M. Field, Tulare, Cal.	1.25
Dr. T. D. Blodget, Tulare, Cal.	1.25
Dr. S. C. Plummer, Chicago.	5.00
Dr. W. H. Axtell, Bellingham, Wash.	1.00
Dr. W. A. Long, Lewiston, Mont.	5.00
Dr. A. W. Sherman, Burlington, Iowa.	1.00
Dr. R. J. Fly, San Diego, Cal.	1.50
A Physician of Jacksonville, Ill.	2.00
Dr. Randolph Winslow, Baltimore.	5.00
Dr. Wm. Treacy, Helena, Mont.	5.00
Dr. Harold J. Rothschild, St. Paul, Minn.	1.00
Dr. Charles L. Minor, Asheville, N. C.	10.00
Dr. W. H. Roberts, Pasadena, Cal.	5.00
Dr. Vincent Bonelli, Vicksburg, Miss.	1.00
Dr. M. H. Bell, Vicksburg, Miss.	1.00
Dr. B. B. Mactin, Vicksburg, Miss.	1.00
Dr. H. F. Sprales, Vicksburg, Miss.	1.00
Dr. Jos. Waldaeur, Vicksburg, Miss.	1.00
Dr. Sylvan Myers, Vicksburg, Miss.	1.00
Dr. Victor E. Bonelli, Vicksburg, Miss.	1.00
Dr. E. F. Howard, Vicksburg, Miss.	1.00
Dr. R. A. Quin, Vicksburg, Miss.	2.00
Dr. H. B. Wilson, Vicksburg, Miss.	1.00
Dr. G. Y. Hicks, Vicksburg, Miss.	1.00
Dr. H. H. Haralson, Vicksburg, Miss.	1.00
Dr. S. W. Johnston, Vicksburg, Miss.	1.00
Dr. J. A. K. Birchett, Vicksburg, Miss.	1.00
Dr. Wm. L. Holt, Paso Robles, Cal.	1.00
Dr. D. E. Kisecker, Caldwell, Kan.	1.00
Dr. James W. Gray, Clarksdale, Miss.	5.00
Dr. A. T. Blachly, Lamedeer, Mont.	2.00
Academy of Medicine of Cincinnati.	100.00
Anonymous, New York City.	15.00
Dr. J. R. Fabricius, New York City.	5.00
Dr. J. Elvin Courtney, Denver.	5.00
Dr. J. J. Moyer, Mayfield, Cal.	1.00
Dr. John W. Ross, Palm Springs, Cal.	10.00
Dr. Clifford U. Collins, Peoria, Ill.	5.00
Tippecanoe County Medical Society, Lafayette, Ind.	15.00
Dr. Joel E. Goldthwait, Boston.	5.00
Total	$3,073.95

$4,500 is still needed to raise the mortgage on the Carroll property.

Study and Prevention of Tuberculosis.—The preliminary program for the fifth annual meeting of the National Association for the Study and Prevention of Tuberculosis, which meets in Washington May 13 to 15, shows the comprehensiveness of the discussions at the meeting. In the advisory council, Dr. Victor C. Vaughan, Ann Arbor, is to read a paper on "Tuberculosis Legislation, State and Municipal." In the Sociological Section, Mr. Homer Folks, New York City, will take up the matter of "Recent Tuberculosis Campaigns and Their Results." In the Clinical and Climatologic Section, of which Mr. Lawrason Brown, Saranac Lake, N. Y., is chairman, a general discussion is to be held on the "Methods of Increasing the Efficiency of the Sanatorium," under the following heads: "Economic and Efficient Construction," "Improved Organization and Management," "Selection of Patients," "Economic and Scientific Dietary," and the "Work for Patients as an Economic, Immediate and Therapeutic Factor." On the second day, Dr. William Welch will deliver an address on "The Selection of a Library for the Study of Tuberculosis;" Dr. Joseph Walsh, Philadelphia, will speak on the "Diagnosis of Intestinal Tuberculosis," and Dr. William C. White, Pittsburg, on "New Method of Estimating the Beginning Dose of Tuberculin." In the Pathologic and Bac-

teriologic Section, of which Dr. Alfred S. Warthin, Ann Arbor, is chairman, the topics for consideration are "The Hematologic Studies in Tuberculosis"; "The Study of the Heart in One Hundred Patients Dying from Advanced Tuberculosis"; "What May be Looked for in the Lungs in Chronic Cases of Pulmonary Tuberculosis"; "The Infection of Man by the Avian Type of Tuberculosis"; "The Tuberculo-opsonic Test in the Diagnosis of Pulmonary Tuberculosis," and "The Amount of Lung Tissue Involved in the Test for Pulmonary Tuberculosis." In the Surgical Section, of which Dr. Rudolph Matas, New Orleans, is chairman, demonstrations of gross microscopic lesions in tuberculosis of bones and joints will be made with the aid of lantern slides, mobilization of tuberculosis joints with animal membrane will be described, and a paper will be read on "Anesthesia in Tuberculosis." The chief papers of the Section of Tuberculosis in Children, of which Dr. John H. Lowman, Cleveland, is chairman, will be on the "Diagnosis of Tuberculosis in Young Children," "Study of Symptomatology of Tuberculosis in Young Children," and "Treatment of Surgical Tuberculosis."

CANADA

Anti-Spitting Law Enforced.—Recently in Montreal, fourteen young men were fined, and eight were given an option of a fine of $3 and costs or thirty days in jail for violation of the anti-expectoration ordinance.

Hospitals in Ontario.—The thirty-ninth annual report of the Hospitals of Ontario for the year ended Sept. 30, 1908, shows that there are in the province 69 hospitals, 34 refuges, 30 orphanages, 3 homes for incurables, 2 convalescent homes and Magdalene asylums, and 28 county homes of refuge under governmental inspection.

Personal.—Dr. George R. McDonough, Toronto, has returned after a winter spent in South America.——Dr. A. E. Garrow, Toronto, convalescent from a long illness, has gone to Bermuda.——Dr. Margaret S. Wallace, Toronto, has been appointed professor of medicine in the College of Medicine for Women, North India.——Dr. John M. Piper, Toronto, is taking a trip to the Mediterranean.

Registration Bill for New Brunswick.—The College of Physicians and Surgeons, New Brunswick, has a bill before the provincial legislature, which provides that all registered practitioners shall constitute the New Brunswick Medical Society and that the council shall be composed of 9 members elected by the society, three each year for a term of three years. Names can be removed from the register for cause by the judge of the supreme court of the Province only.

Society Meetings.—The Association of Medical Officers of the Militia of Canada held its annual meeting at Ottawa February 25 and 26, the president, Col. George S. Ryerson, M.R.O., Toronto, in the chair. The following officers were elected: President, Lieutenant-Colonel Hubert S. Birkett, Montreal; vice-presidents, Lieutenant-Colonels G. S. Rennie, Murray, MacLaren, Blanchard and Jenkins, Majors Rankin, M. P. Kilborn, A. T. Shillington, E. R. Brown and E. A. Lebell, and Captains Williams and McTavish and Lieutenant S. W. Hewitson, and Secretary-Treasurer, Captain T. H. Leggett, Ottawa. The next annual meeting is to be held at Ottawa Feb. 24 and 25, 1910.——The Regina (Sask.) Clinical Society was organized April 3, and the following officers were elected: President, Dr. John M. Shaw; vice-president, Dr. H. M. Stevens; secretary, Dr. Harry Morell, and treasurer, Dr. A. E. Rothwell.——The Canadian Branch of the International Congress on School Hygiene was organized in Toronto during the meeting of the Ontario Teachers' Association last week. Sir James Grant, M.D., Ottawa, was elected president, and Dr. Helen MacMurchy, Toronto, secretary.——The third annual meeting of the Canadian Hospital Association was held in Toronto during the week ended April 17, under the presidency of Dr. W. J. Dobbie, Weston Sanatorium, Ont. The following officers were elected: President, Dr. Henry E. Webster, Royal Victoria Hospital, Montreal, and secretary, Dr. John N. E. Brown, Toronto General Hospital.

FOREIGN

The Catastrophe in Southern Italy.—The *Policlinico* of Rome adds the names of five more physicians to the list it has already published of the medical victims of the disaster. This last group were all army medical officers. Professor Gabbi has prepared a question blank with 29 questions in regard to the nervous disturbances observed after the earthquake, and is distributing these blanks hoping to obtain the elements for an original study which may throw new light on an important branch of medicine. The *Policlinico* has received subscriptions for aid of the physicians suffering from the effects of the earthquake; the amount is now nearly $500, and it reports nearly $2,000 received by the national medical association and distributed in amounts of $10 up to $40 to physicians or widows of physicians.

Sanfelice's Serotherapy of Cancer.—THE JOURNAL has mentioned from time to time the research of Professor Sanfelice of Messina on the saccharomycetes found in cancers, one species having proved capable of inducing in animals tumors closely resembling cancer in man. He has been at work for fifteen years on research in this line and has succeeded in isolating a toxin from this special saccharomyces which has the same effect on animals as inoculation of the germ itself, that is, causing apparently malignant tumor growth. He has further succeeded in obtaining a curative serum from animals immunized against this toxin, and this serum has shown marked curative action when animals with the experimental tumors were injected with it. He had just begun to apply this serum treatment in the clinic when the earthquake at Messina destroyed his laboratory. He was in northern Italy at the time trying to organize a national cancer research committee and central cancer institute.

Recent Deaths in the Profession Abroad.—Most deaths of prominent men abroad are mentioned in the letters from our foreign correspondents. Among those not mentioned elsewhere are: P. I. Diakanow, professor of surgery at Moscow and editor of the Russian surgical journal *Khirurgia*.——J. G. Metzger, of Paris, the massage specialist, who was a Hollander, originally a teacher of gymnastics, but who studied medicine and devoted himself to developing and practicing massage, first at Amsterdam, then at Wiesbaden. He finally settled in Paris where his success was a potent factor in popularizing massage.——K. Seggel, the ophthalmologist, of Munich.——A. Boursier, professor of gynecology at Bordeaux.——B. Vedeler, a prominent gynecologist at Christiania.——Dr. Paulun, president of the German medical school at Shanghai.——H. Brat, of Berlin, a well-known writer on occupational affections and hygiene.—U. Mosso, professor of materia medica at Genoa.—— Dr. Motet, of Paris, author of numerous works on the medicolegal aspects of insanity and on hygiene, secretary of the *Académie de Médecine* from 1902 to 1908.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 3, 1909.

British Medical Colleges for China

A movement has been started for the foundation of medical colleges in China under Christian auspices. It is thought that with the awakening of China to western civilization the time is opportune for furthering the propagation of Christianity and that some attempt should be made to educate the Chinese on a Christian basis and not allow their education to fall entirely into the hands of the Japanese who would put it on an agnostic basis. A meeting has been held at the Mansion House which was attended by Sir Robert Hart, late director of the Chinese customs, the American ambassador and other important personages, and a resolution was adopted calling for the provision of at least $500,000 for the purpose. The following scheme has been elaborated: 1. The establishment in the four principal cities of China of colleges for the training of Chinese students in western medicine, uniting the Christian churches working in China without sacrificing their various denominational principles. 2. The provision in as many centers as possible of normal training for Chinese school teachers and pastors on the same basis of unity as the medical colleges. 3. The publication in Chinese of the best western literature suitable for medical, normal training, and theological colleges to assist the Christian literature and tract societies at work.

Scalded by Water Used to Check Postpartum Hemorrhage

The proverbial ingratitude of patients is illustrated by the following case in which a woman brought an action against her physicians for doing a thing which probably saved her life. In the Aberdeen sheriff court Drs. J. A. Mearns and W. J. Bryce were each sued for $625 damages for alleged negligence in treating her during her confinement. She was scalded by the injection of hot water used to check postpartum hemorrhage. The sheriff in giving judgment remarked that it was a most painful case to decide in consequence of the mutual aspersions of the parties. On the one hand, there was no

ground for accusing the plaintiff of shamming or malingering. Yet he could hardly understand how she suffered so severely from the application of water not hot enough to scald the hands of the physicians. In the absence of any proof of negligence, he must regard the scald as the result of accident, whether due to abnormal sensitiveness of the skin, to the midwife allowing the sheet saturated with hot water to remain in contact with the skin, or to some unascertained circumstance. Even in hospitals where the patients had the advantage of the highest skill and the most scientific appliances blisters had resulted from the use of hot water in the treatment of hemorrhage. He sympathized with the plaintiff, but he doubted if she would have brought the action if she had known that the physicians probably saved her life when she was under chloroform by promptly applying the only available remedy. If desperate cases called for desperate remedies, a physician might be pardoned for taking the risk of the water being too hot for the patient's skin instead of allowing her to bleed to death. He therefore gave judgment for the defendants.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 8, 1909.

The Number of Medical Students in Paris

The council of the University of Paris has forwarded to the minister of public instruction its report on the situation and the work of the different faculties, as well as of the superior school of pharmacy, for the school year, 1907-1908. The author of the report, Dr. Pouchet, professor at the Faculty of Medicine, has drawn up a statement of the number of students registered at each faculty. In the Faculty of Medicine this number has risen to 3,535, exceeding the preceding year by 334. This total comprises 3,330 candidates for the M.D. degree (an increase of 293 over the preceding year); 4 for that of *officier de santé* (a decrease of 2 on the preceding year); 32 candidates as midwives of the first class (about the same as the figure of the preceding year); 48 as midwives of the second class (an increase of 7 over the preceding year), and 121 surgeon-dentist students (an increase of 6 over the preceding year).

The number of medical students of foreign nationality is markedly diminished (311 in place of 431). This diminution occurs largely in the Russian students (110 in place of 132). On the other hand the number of foreign women students is greatly increased (207 in place of 168), while that of French women students has increased from 78 to 94.

At the school of pharmacy, the number of students registered was 1,001, the women students numbering only 12, in place of 23.

The Protection of Infants of Tender Age

The minister of the interior has addressed to the President of the Republic a report on the carrying out of the Roussel law, relative to the protection of infants of tender age, and particularly of nurslings. This law places under surveillance of the public authority, with a view to the protection of its life and health, every infant under two years of age which, for pay, is put out to nurse, for weaning, or for custody, away from the home of its parents. The report just published covers the year of 1905, and gives some interesting information concerning the mode of rearing children.

Of 171,132 infants under protection during 1905 the mode of bringing up is precisely stated in only 159,643 cases, as follows: Nursed at the breast, 47,553, or 29.8 per cent.; artificial feeding, 99,040, or 62 per cent.; mixed feeding, 3,204, or 2.1 per cent.; infants weaned, 9,846, or 6.1 per cent. In 1903, out of 177,488 infants protected, 57,394, or 32.4 per cent., were nursed at the breast; 104,261, or 58.8 per cent., had artificial feeding; 15,733, or 8.8 per cent. were on mixed feeding or weaning. These figures show that the breast nursing of infants placed out to nurse tends to fall. This is particularly true for the northern part of France, where bottle feeding prevails; while in the southern part, breast nursing predominates.

A Hospital for the Tuberculous

The city of Paris is about to construct a hospital exclusively for the tuberculous of both sexes, to contain 1,200 beds. This will render it possible to give tuberculous patients treatment more appropriate to their condition, and also to relieve certain hospitals in which the tuberculous now occupy a large number of beds and are a continual menace of contagion for the other patients.

Prizes for Hospital Merit

M. Leon Grunbaum has remitted to M. Mesureur, director of public assistance, a sum of 3,800 francs ($760) for the purpose of distributing six prizes of 500 francs ($100) each, and four gold medals of the value of 200 francs ($40) each to the nurses of the Cochin and Lariboisière hospitals. In each of these hospitals the jury of award will consist of the director, with the chief physicians of the respective services. M. Grunbaum hopes that these prizes will encourage those nurses who have shown excellent qualities of heart rather than professional technical aptitude. If this experiment succeeds—and it can hardly fail to succeed, for the candidates are already very numerous in the two hospitals named—M. Grunbaum intends to establish a definite foundation for the award of these prizes of "hospital merit."

Centenary of the Operation of Ovariotomy

Dr. Pozzi, professor of clinical gynecology at the Faculty of Medicine at Paris, has been appointed by the French government to represent the University of Paris at the centenary of the operation of ovariotomy in the United States.

Anti-Alcohol Instruction

The minister of public instruction, in a circular, has called the attention of the academic rectors to the fact that the decree of March 9, 1897, ordered the introduction into the educational syllabuses of definite instruction on the dangers of alcoholism. Although the teachers were invited to organize meetings to denounce the scourge that ravages the land, the minister regretfully announces that the results are hardly or not at all perceptible. It seems essential that the teaching faculty in all its grades should redouble its energy against alcohol and absinthe. The minister, moreover, calls on the rectors to favor the creation or extension of pupils' temperance societies in the secondary teaching establishments as well as in the primary schools. The ministerial circular points out that other countries have set a salutary example in this respect; thus, in Belgium, the propaganda in the schools, both by means of anti-alcohol teaching and by the action of temperance societies, has had the effect of reducing the consumption of alcohol *per capita* from 10.22 liters in 1891, to 8.45 liters in 1902, and 5.78 liters in 1905.

Reorganization of the Morgue

In accord with the ministries of justice and of public instruction, and conformably to a recent decision of the general council, the prefect of the Department of the Seine has appointed a commission to draw up a complete scheme for reorganization for the morgue. This commission contains among other members Professor Landouzy, dean of the Faculty of Medicine of Paris, and Dr. Thoinot, medical inspector of the morgue.

Epidemic Meningitis

Because of the disquieting recrudescence of epidemics of typhoid and cerebrospinal meningitis appearing in different localities, M. Clemenceau, minister of the interior, has addressed to all the prefects a circular directing them to issue an urgent summons to the permanent council of hygiene of their department, to elaborate prophylactic measures against these epidemics. In Paris the council of hygiene of the Department of the Seine has brought its decisions to the knowledge of the public by means of placards. It has decided, among other measures, to address to all physicians of Paris and the Department of the Seine a circular containing instructions necessary for the diagnosis of the diseases and the measures to be adopted with the patient. This circular will also enumerate all the facilities placed at the disposition of physicians by the sanitary service of the prefecture of police and the prefecture of the Seine.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, March 31, 1909.

New Examination for Dentists

A few days ago a new examination for dentists was provided by the federal council. This gives the right of conferring license on dentists to the authorities of each state of the empire which has one or more national universities. The production of a certificate of graduation is a condition for entrance on the study. The time spent in military duty can not be reckoned in the prescribed period of study. The new regulations take effect on October 1 of this year.

Serum Treatment of Typhoid

Professor Hoffmann has recently reported the result of an investigation of the serum for typhoid recommended by two young Berlin investigators, Bergell and F. Meyer. He comes to the conclusion that the application of this antitoxic typhoid serum to man is not justified at present. The presence in the serum of agglutinins, precipitins and substances favoring phagocytosis was confirmed, but it was shown that there is not enough antitoxin to neutralize the toxin set free by the death of the bacteria.

Hygiene of Barber Shops

The municipal authorities of Stuttgart have passed an ordinance for securing cleanliness in barber shops. The shops must be provided with a seamless impermeable floor covering. Combs and brushes must be cleansed at least once a day in warm solution of soda. Every customer must be furnished with a clean towel, etc. Violations of these rules are punished by a fine up to $36.00 (150 marks) or by imprisonment.

Tips for Securing Patients

We have described the method of the Russian Institute which secures Russian patients to prominent specialists for a fee. In connection with a trial of two Berlin physicians for some alleged insult this custom was made the subject of a judicial inquiry, and it came out that a number of Berlin professors of the first rank were in the habit of paying fees to the proprietors of this institution as well as to other agents for bringing them patients. The names of all those who were guilty of such a practice were not disclosed in the trial, but their exposure is only a matter of time for the tribunal of honor as well as the Berlin medical faculty will investigate the matter thoroughly. The disclosures have already furnished one victim, and this person seems to be the least guilty. Among those named in the trial is the prominent clinician Senator. As he is president of the Berlin Medical Society this body has engaged in the discussion of the question of his culpability. Senator explained that he had paid the money not as a tip but as a fee to interpreters, but since the matter is likely to become the subject of judicial investigation he has resigned his office as president. The medical society is satisfied with this, for it must be admitted that the man occupying an office which has been held by such men as v. Graefe, Langenbeck, Virchow and v. Bergmann should be above reproach. The majority of Berlin physicians believe that Prof. Senator is a man of entirely honorable character who has not knowingly transgressed the ethics of the profession, and it is hoped that he will come out of the judicial investigation spotless. Under these conditions it may well be expected that he will be reinstated in his office at the next election of president of the society, and this rehabilitation is very desirable for a distinguished scientist who with gray hairs has reached his seventy-fifth year in honor. The situation is not as good with the majority of the other professors named in this affair. The result of the exposure of their practices is likely to affect them for a long time. Some of them have published explanations which indicate that the revelations in the court were incorrect. They claim that they are not guilty of the offense of which they are accused. A definite decision for or against them can not be given by outsiders. As an appeal from the decision of the court has been taken by both of the litigants, a new trial will occur which it is hoped will clear up the matter. Moreover, the tribunal of honor, as well as the faculty of the Berlin university will take further notice of these charges.

The Cause of Trachoma

About two years ago Prof. Greeff, director of the university eye clinic of this city, published an account of his discovery of bodies in the cells and secretion of the conjunctiva in cases of trachoma which in his opinion were the existing cause of this disease. Greeff has continued his investigations and has reached the result according to an article in the last number of the *Deutsche medizinische Wochenschrift* that these bodies are really the cause of trachoma. They are round bodies considerably smaller than the smallest cocci. They stain intensely violet or reddish with the Giemsa stain, less strongly with anilin dyes and do not stain with Gram's stain. Commonly they lie side by side as diplococci. These bodies are hard to recognize and it is necessary to examine fresh and untreated cases. After a few days of treatment with solid copper sulphate the bodies are no longer demonstrable in smear preparations. The detailed methods of staining and drawings of these bodies are to be found in the original article to which those interested are referred.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, April 3, 1909.

Mortality in Vienna

The latest report of the metropolitan board of health for 1908 contains a few interesting figures in regard to mortality in the city of Vienna. The average death rate was 17.57 per thousand, lower than any preceding year. Altogether 35,511 persons died last year, 18,334 men and 17,177 women. Of these deaths, 8,320 (24 per cent.) were of infants under 12 months, and 2,803 of children between 2 and 5 years, so that 11,123, or fully 31 per cent. of the total, occurred in the first five years of life. Among children the causes were chiefly measles, scarlet fever and whooping cough; among those over 65 years, carcinoma and marasmus; while pneumonia and gastrointestinal diseases were responsible for many deaths among the middle-aged. A decided decrease was noticed in deaths due to cerebral disease and tuberculosis, although the last-named was still responsible for the largest number of deaths (5,564, or 15 per cent.). At any rate, the decrease in deaths from tuberculosis (5,564, against 5,840) is too marked to be accidental.

To Protect from Dangers of Lye

The ministry has just issued an ordinance regulating the sale of the liquid known as household caustic potash. An investigation concluded by a special committee of the Vienna Medical Society has demonstrated the amount of harm done by the careless handling of this liquid, and its suggestions were adopted by the ministry. Thus, in future the liquid must not be sold otherwise than in special bottles distinctly labeled "poison," nor in small quantities in stronger solution than 1.25 per cent. An unpleasant smell must be imparted to it by the addition of a few drops of ammonia. Children must not be sent for the bottles. Accidents and attempts at suicide with caustic potash solution have been so numerous during the last few years as to attract public attention.

Restrict Use of Phosphorus in Matches

Another important measure now under consideration is a bill regulating the manufacture of matches, as the use of white or yellow phosphorus in making matches is not illegal here. The investigations of the Vienna Medical Society have proved, not only that the present regulations do not prevent that dreaded disease, phosphorus necrosis, but that no means short of prohibition of the use of phosphorus can be relied on to stop it. Therefore the government, which lately has turned a somewhat friendlier ear toward the wishes of sanitarians and public health officers, has brought in a bill making the use of phosphorus in match factories a serious offense after July 1, 1912. Meanwhile, strict regulations to lessen the risk of employés are to be enforced. Thus, no one may work longer than four weeks at a time in one branch of the manufacturing process, which consists of three parts. Special ventilation plants and sufficient lavatory accommodations, including a supply of soap and hot water, as well as special working gowns must be provided by the employer; and a control system to ensure personal cleanliness, and especially to prevent the employés from eating with unwashed hands, is made obligatory. A prize has been offered for the invention of a method of using phosphorus without harm to the health of the workers, and without making the cost of the product prohibitive. Unless such a method is invented before July 1, 1911, the law—for there is no doubt that the bill will become law—will be put in force one year later.

Wet-Nurses and Syphilis

A movement, arising out of a paper by Drs. Sperk and Pollak, has been initiated in medical circles for taking the business of providing healthy wet-nurses out of the hands of professional agents and turning it over to a municipal or state institution, where every nurse, together with her baby, could be examined before being permitted to suckle another child. A series of cases seen recently at one of our largest children's ambulatory clinics shows the imminence of this danger. In one case a wet-nurse infected a whole family. Her own baby showed symptoms of hereditary syphilis; yet the physician of the agency which negotiated the supply of wet-nurses had made no effort to have the woman struck off the list. The suggestion has received unanimous assent, and a petition, signed by the leading physicians of the city and supported by the senate of the university, will be presented to the board of health, asking for the complete suppression or reliable regulation of such agencies.

Pharmacology

PROSECUTIONS UNDER FOOD AND DRUGS ACT

The Value and Necessity of Pure Food Laws and What They Are Accomplishing

As a broad generalization, the command, "Thou shalt not lie," has been accepted as a good moral precept for a number of centuries; when applied specifically, however, more or less specious arguments have, in all ages, been advanced against too slavish an adherence to its tenets. This point has been somewhat emphasized since Jan. 1, 1907, when the national Food and Drugs Act went into effect and so modified the earlier commandment as to read in effect "Thou shalt not lie on the label." As a general proposition, that requirement of the law would seem incapable of working hardship to any one —yet apparently it does.

"HARPER'S BRAIN FOOD"

For instance, Robert N. Harper, of Washington, D. C., manufactured a headache nostrum to which he gave the euphonious name "Harper's Cuforhedake Brane-Fude." This was sold with the statements that it contained no "poisonous ingredients of any kind" and that it was a "harmless relief." The Bureau of Chemistry of the Department of Agriculture analyzed this "harmless" and "non-poisonous" preparation and reported that it consisted of the following ingredients:

Alcohol (per cent. by volume)	24.2
Acetanilid (grains per ounce)	15.0
Caffein (per cent.)	1.5
Antipyrin (per cent.)	1.0

Potassium, sodium and bromids also present.

Inasmuch as this nostrum was shown to be neither "harmless," "non-poisonous" nor a "brain food," Mr. Harper was found guilty of misbranding and sentenced to pay a fine of $700. Motions were made in arrest of judgment and also for a new trial, both of which were overruled. Then notice was given of appeal to the Court of Appeals. Subsequently, however, Mr. Harper withdrew the appeal and paid the fine.

HANCOCK'S LIQUID SULPHUR

The Hancock Liquid Sulphur Company of Baltimore marketed a product of the same name for which they made numerous claims. The statements on the label represented that this preparation contained some unknown, peculiar liquid sulphur and that it was "Nature's Greatest Germicide" as well as "the Great Cure for . . . Diphtheria . . . " and numerous other conditions such as "itch," "granulated eyelids" and "pimples." The Bureau of Chemistry analyzed a sample of this product and reported that it "consisted of an aqueous solution of commercial calcium sulphid." R. N. Menefee, manager of the Hancock Liquid Sulphur Co., was therefore prosecuted by the government for shipping a misbranded product. The court decided that a solution of calcium sulphid was not "Nature's Greatest Germicide," neither was it a "Great Cure for . . . Diphtheria . . . " and that the statements on the label "were false, misleading and deceptive." The manager of the company entered a plea of guilty and the court imposed on him a fine of $100.

"CONCENTRATED OIL OF PINE COMPOUND"

A preparation labeled "Concentrated Oil of Pine Compound," manufactured by the Globe Pharmaceutical Co., Dayton, Ohio, was subjected to analysis by the Bureau of Chemistry. The result obtained showed, according to the report, that the sample examined "consisted of a mixture of fixed oil, a resinous substance and a small amount of volatile oil . . . resembling turpentine." This analysis made it evident that the product was misbranded as "the composition did not in any way warrant the use of the name 'Concentrated Oil of Pine Compound,' and the statement that it was such was false, misleading and deceptive." The Globe Pharmaceutical Co., in the persons of Wm. E. Pilkinton and A. P. Foose, pleaded guilty to the charge and paid the fine imposed and the costs of the prosecution.

"CASTOR OIL PILLS"

Robert Blackburn, doing business under the name of the Victory Remedy Company, Dayton, Ohio, was prosecuted by the United States for shipping a misbranded drug product from Ohio to Michigan. The preparation in question was labeled "Blackburn's Cascara, Wild Lemon, Castor Oil Pills, Compound," and samples were subjected to analysis at the government laboratory. According to the report the "pills" contained "calcium sulphid, capsicum, atropin (introduced probably, in the form of belladonna extract)." As to castor oil, if they contained any, it was at most a trace. As the cathartic, curative and therapeutic effects of castor oil were naturally "almost wholly absent," the use of the name "castor oil pills" was unjustified and constituted misbranding. Blackburn pleaded guilty and paid the fine and costs of prosecution.

"SARTOIN SKIN FOOD"

The Globe Pharmaceutical Company, which has already been referred to in connection with the "Concentrated Oil of Pine Compound," also marketed what was known as "Sartoin Skin Food." The modest claim was made for this preparation that it "is probably the most effective remedy known to science for sunburn, rashes and all skin blemishes" and that it was equally effective in "creating the normal growth of all parts not fully developed and shrunken." The Bureau of Chemistry analyzed a sample of this "skin food" and found "the most effective remedy known to science" to consist essentially of "epsom salts colored with a pink dye." The government decided that to claim epsom salts to be a "food" is "false, misleading and deceptive"; as Wm. E. Pilkinton and A. P. Foose (the Globe Pharmaceutical Co.) failed to "show any fault or error in the findings of the analyst," but pleaded guilty, they were each fined $10.

It must not be thought that these five prosecutions represent all that has been accomplished in bringing adulterators or misbranders to justice under the provisions of the Food and Drugs Act; up to April 12, 1909, no fewer than fifty judgments have been rendered against firms or individuals that have violated the law. When it is borne in mind that advantage of every legal technicality is likely to be taken by those who make a business of putting on the market adulterated food-stuffs or misbranded "patent medicines," the success of the Board of Food and Drug Inspection is highly to be commended.

Apparent Incompatibility in a Prescription

To the Editor:—I find the following prescription in Keen's "Surgery" under Specific Urethritis

R.	Zinci sulphatis	gr. xvi
	Plumbi acetatis	gr. xxx
	Glycer. of tannin,	
	Lloyd's hydrastis	āā, ℥iv
	Mucil. acaciæ	℥iv
	Aquæ destillat., q. s. ad	℥vi

M. Sig.: Inject.

My druggist says this mixture is incompatible, the lead acetate and mucilage of acacia forming a lumpy precipitate, which could not be injected. As Horwitz recommends this prescription, I think there must be some way of preparing the same, so that it will not be lumpy.

C. L. E., California.

ANSWER.—In compounding the prescription several reactions occur which no doubt the prescriber wished to take place. Zinc sulphate and lead acetate interact to form insoluble lead sulphate and soluble zinc acetate. Any alkaloid hydrastin which is contained in Lloyd's hydrastis will react with tannin in the glycerite of tannin to form an insoluble hydrastin tannate; also, any lead that remains in the solution will combine with the tannic acid to form insoluble lead tannate. Soluble lead salts also react with acacia to form a precipitate which is liable to be coherent and gummy in character, and consists of the lead salt of arabic acid. Acacia consists chiefly of arabic acid in combination with calcium, potassium and magnesium, and when a solution of acacia is

mixed with a solution of a lead salt, insoluble lead arabate is formed. The following procedure, however, will give a uniform mixture, which, even after standing several days, can still be shaken up into a uniform emulsion: Dissolve the zinc sulphate in water and to this add the lead acetate, also dissolved in water. The Lloyd's hydrastis is then added, followed by the glycerite of tannin, and finally the mucilage of acacia.

Correspondence

Refraction

To the Editor:—"Say nothing but good of the dead" is good advice; yet I feel that the article by the late Dr. St. John Roosa (THE JOURNAL, Feb. 13, 1909, p. 543) should be criticized.

I do not think that Dr. St. John Roosa was right when he said: "An eye with a moderate degree of hypermetropia without corneal astigmatism, other conditions being favorable, will do its work in a thoroughly satisfactory manner." I often have patients with moderate hypermetropia, without any corneal astigmatism, in whom the general health is good and who yet suffer from severe and intolerable headaches. I recently had as a patient a dental student who had one diopter of hypermetropia without any corneal astigmatism and who was in good health, but suffered from constant headaches that interfered with his work. He was entirely relieved of his headaches by plus 0.75 spheres for each eye.

Nor can I endorse the statement that if glasses do not improve the vision . . . they are absolutely of no use." The patient whose case I just cited above had no improvement in vision with his glasses as his vision was good without glasses, and this is the case with most hypermetropes of moderate degree and without corneal astigmatism.

I do not believe that Donders said the last word on refraction: I think that a great deal is yet to be learned in regard to refraction.

There are very few, if any, who will claim to get good results without mydriatics and with ophthalmometers which Dr. Roosa recommended so highly. In the case that I have just cited of the dental student, the refraction of the eye had been determined several times by some one who used an ophthalmometer and the patient was wearing weak compounds when he came to me with his severe headaches. Reverting to the statement that "if glasses do not improve the vision . . . they are absolutely of no use," it may be said that just this idea is the source of trouble in the cases of many school children who suffer from hypermetropia. They have good vision without glasses and, if they are examined by some one who is not a competent oculist, are dismissed with the statement that their eyes are all right.

Articles like that by Dr. Roosa have a bad influence on the general practitioner and have a tendency to encourage opticians and the traveling spectacle-vender.

M. MORGAN CLOUD, Los Angeles, Calif.

Tuberculosis or Consumption?

To the Editor:—The following advertisement appeared lately in the daily papers under the official emblem of the International Congress for the Prevention of Tuberculosis:

> "Join the fight against tuberculosis. The war is being led into the camp of the enemy by the *Metropolitan Magazine*. 200,000 people are killed each year in the U. S. alone, and 3,000,000 are afflicted with the disease. The April article is by Mr. O. F. Lewis of the New York Charity Organization. Other articles will follow by the leading specialists of the world."

I desire to call attention to the advisability of conservatism in this matter. To overdo it will cause a reaction in the public mind. In 1902, we told the public that 100,000 people die every year from tuberculosis. In 1909, after seven years of hard fighting with all scientific achievements at our command, with all the vast sums expended, with all the aid of civilized governments cooperating with well-trained physicians and an intelligent public, it is now said that over 200,000 die every year of this disease in the U. S. alone. There can be only one deduction, and that is, that the claim that tuberculosis is a preventable disease is contrary to fact.

Progress in medical science now enables us to diagnose tuberculosis at a very early stage, so that its more frequent discovery makes it appear to be on the increase. "Consumption," however, *i. e.*, the advanced stage of tuberculosis, when it has become a "consuming" disease, is in fact, on the decrease, for many more patients are now cured before they get to the "consumptive" stage.

We should not teach, therefore, that tuberculosis is synonymous with consumption, for it is not. This teaching is objectionable on the following grounds:

1. Tuberculosis in the incipient stage is curable, while the advanced stage called consumption is nearly always beyond the point of possible arrest.

2. The belief in their identity has a depressing effect on patients in the early stage, from the sinister significance of the word consumption.

3. The teaching that tuberculosis and consumption are identical and that tuberculosis is a curable disease, rouses false hopes of cure in every case to the ultimate detriment of scientific medicine.

4. It exposes the public to the mercy of the charlatan who pronounces every case of cough tuberculosis; and it plays up to the fakers who advertise marvelous "cures of consumption."

5. Finally, the fakers make capital out of incipient cases curable by any treatment, while the fate of the patients in the incurable cases is laid to the medical profession. If the public understood by consumption only the cases of consuming disease, fakers could be challenged to make good their claim.

The term tuberculosis should be reserved for scientific use, that of consumption being retained for advanced cases, and these alone should be dealt with in statistics for the public use. We should then be able to show a decrease in consumption instead of an increase in tuberculosis.

L. W. ZWISOHN, M.D., New York.

Miscellany

First Aid in Electric Accidents.—The *Scientific American*, March 20, 1909, calls attention to the need of instruction of men engaged in handling electric circuits in the proper immediate treatment of persons injured by strong currents and in self-protection. A fallen live wire may be safely removed by a rope improvised from a twisted coat. A person who has fallen across a live rail may be removed by pulling on his coat or by using a wooden pole. A live wire may be cut by pliers provided with wooden handles boiled in paraffin. Interesting experiments have shown that a fireman incurs practically no danger in directing fresh water from a hose against a live high-tension wire at a distance of 3½ feet, although salt water was not used and would doubtless be found a far better conductor of the current. Chemical extinguishers were found very dangerous. This fact should be more generally known, as passenger trains are usually equipped with chemical extinguishers and, in case of a wreck on an electrified line, serious consequences might result from playing an extinguisher on a charged wire.

A Claim to Priority.—Dr. W. H. Hutt of Philadelphia has issued a pamphlet, "The First Fifteen Years of the Antituberculosis Crusade, 1873-1888," in which he claims to have put into practice—1873 to 1888—the principle of seeking public aid and legislative assistance to carry out the outdoor and fresh-air treatment of tuberculosis, combined with adequate feeding. His efforts culminated, he says, in February, 1884—a year before the sanatorium at Saranac Lake was opened—in the establishment at Glen Mills, Delaware county, Pa.,

of the first public institution for the outdoor treatment of the tuberculous. This movement was aided by the Protestant Episcopal City Mission, and it is said received the support of the following well-known physicians: Drs. Rowland G. Curtin, W. Joseph Hearn, D. Hayes Agnew, James Tyson, William Pepper, S. W. Gross and William H. Pancoast. While, for various reasons, the movement had to be abandoned, Dr. Hutt claims its recognition among the seed that has brought forth the fruit of modern organized methods for the public treatment and prophylaxis of tuberculosis.

Thyroid Treatment of Lipomatosis.—P. Morsaline reports in the *Revista de la Sociedad Medica Argentina*, XVIII, p. 281, 1908, several cases of symmetrical lipomatosis. One patient in particular was a middle-aged man with lipomatosis especially prominent in the neck. The symmetry of the lesions indicated trophic nervous disturbances and various signs of infantilism, etc., suggested that the thyroid gland had been functioning defectively. Morsaline cites a few cases from the literature in which lipomatous lesions coexisted with almost complete absence of the thyroid. Thyroid treatment is said to promote the growth of the skeleton, reduce elimination of lime and facilitate the consolidation of fractures in cases of defective thyroid functioning. In his case the thyroid had also suffered from the action of liquor. For all these reasons, after a course of strychnin, he ordered thyroid treatment, and the tumors in the neck, back and abdomen were a third smaller after three months of treatment, and considerably softer, while the patient's general health was much improved.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

AFTER-EFFECTS OF VASECTOMY

To the Editor:—In THE JOURNAL, April 3, is an editorial in advocacy of vasectomy for confirmed criminals and defectives. Is it a fact beyond dispute that there have been no deleterious after-effects from this operation? Is the sexual appetite affected by it?
J. L.

ANSWER.—While vasectomy for the sterilization of those judicially declared unfit for citizenship is a recent practice, yet vasectomy for other purposes—the relief of prostatic and vesicular disease, and of recurrent epididymitis—has long been a standard surgical procedure; so has the excision of the tuberculous epididymis and vas. There is therefore a large surgical experience as to the effects of vasectomy on sexuality. This experience affirms that neither sexual desire nor sexual power is impaired by vasectomy. For example, Ochsner (A. J.) stated before the Chicago Medical Society, April 7, that men on whom he had performed vasectomy were sexually normal ten years later. Others have made similar observations and say that they have not seen impairment of sexuality follow the operation. The testis furnishes two products, spermatozoa and an internal secretion. Neither of these is arrested by occluding the seminal duct, for Posner years ago reported that by puncture of the testis he had withdrawn living spermatozoa ten to seventeen years after occlusion of the epididymis by gonorrheal invasion. Belfield of Chicago, on making an anastomosis of epididymis and vas for the cure of sterility, found spermatozoa present fourteen years after occlusion of the epididymis had occurred. That vasectomy itself is equally harmless to the spermatogenic function is shown in a case in which he reunited the vasa three years after they had been divided, the semen subsequently containing normal spermatozoa. Moreover, absence of the spermatogenic function of the testis does not include absence of sexual desire or power; this is amply proved by cases of retained testes, the subjects being sexually vigorous though the testes produce no spermatozoa. It is also shown by the sexual vigor of those whose spermatogenic function has been arrested by exposure of the testes to the *x*-ray. Evidently it is the internal, not the external (spermatic) secretion of the testis which confers and maintains sexuality; evidently the two functions are independent; and evidently neither is arrested by vasectomy. Sterilization of criminals by *x*-ray exposures has been proposed as a substitute for vasectomy; among the objections to this is the observation that such sterilization seems to be transient.

INTRAVENOUS MERCURIAL TREATMENT IN RHEUMATISM

To the Editor:—In THE JOURNAL, April 3, 1909, page 1151, reference is made to intravenous mercurial treatment in rheumatism. Can you give me a formula for use? What action would it be likely to have on the blood and economy if continued in a tuberculous patient, the dose being only 1 mg. or 3 mg. every three days?
G. W. PARK.

ANSWER.—The drug used by Ortali in the article referred to was mercuric chlorid. It is usually given in 1 per cent. solution and the solvent should be an isotonic (normal) salt solution. An account of the technic of intravenous injections may be found in an article by G. P. Crume in THE JOURNAL, Dec. 19, 1908, p. 2155. We can not say what would be the effect of such injections if continued in a tuberculous patient. The dose proposed would probably be so small as to produce little if any effect.

BOOKS ON HYPNOTISM AND PSYCHOTHERAPY

To the Editor:—Please name some good books for the information of physicians in regard to psychotherapy. R. M.

ANSWER.—A fairly full list of books on this and related subjects was given in THE JOURNAL, Feb. 29, 1908, p. 710. This was added to considerably, Feb. 13, 1909, p. 577, and further additions were made Feb. 20, 1909, p. 650.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers for the week ended April 17, 1909:

Raymond, T. U., major, granted leave of absence for 1 month.

Munson, E. L., major, granted leave of absence for 2 months 10 days, about June 5.

Woodson, R. S., major, ordered to Fort Hamilton, N. Y., for duty, instead of Fort Du Pont, Del.

Brown, H. L., capt., granted leave of absence for 6 days.

Hart, W. L., 1st lieut., ordered to accompany Company G, Engineers, to San Francisco, Cal., then to return to Washington Barracks, D. C.

Hopwood, L. L., Freeman, C. E., McIntyre, H. B., 1st lieuts., ordered to report at San Francisco for examination for promotion.

Love, A. G., Jones, H. W., Pinkston, O. W., Reasoner, M. A., Hanson, L. H., Schmitter, F., 1st lieuts., ordered to report at Washington, D. C., for examination for promotion.

Baily, H. H., capt., ordered to accompany Company F, Engineers, from Washington Barracks, D. C., to Vancouver Barracks, Wash., and then return to station, Fort Myer, Va.

Sparrenberger, F. H., M. R. C., granted an extension of 20 days to his leave of absence.

Kress, C. C., M. R. C., relieved from duty at Fort Bliss, Tex., in time to proceed to San Francisco and sail June 5 for the Philippine service.

McMillan, C. W., M. R. C., ordered to duty at target range near Ashland, Neb., during the target practice season.

Hughes, L. S., M. R. C., ordered from Fort McDowell, Cal., to temporary duty at the Department Rifle Range, Point Bonita, Cal.

Hewitt, J. M., M. R. C., ordered to duty with troops in the Yosemite National Park.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for week ended April 17, 1909:

Reed, T. W., asst.-surgeon, orders of March 17 modified; detached from the *Colorado* and ordered to the Marine Recruiting Station, San Francisco, and to duty in attendance on officers and families not otherwise provided with medical service.

Connor, W. H., acting asst.-surgeon, ordered to duty at the Naval Hospital, Norfolk, Va.

Wilson, H. D., surgeon, ordered to additional duty in charge of the medical departments of the *Indiana*, *Kentucky* and *Illinois*.

Fiske, C. N., P. A. surgeon, ordered to special temporary duty in the bureau of medicine and surgery, Navy Department.

Bell, W. H., and Kennedy, R. M., surgeons, detached from the bureau of medicine and surgery, Navy Department, and ordered to instruction at the Naval Medical School, Washington, D. C.

Wentworth, A. R., surgeon, detached from the *Louisiana* and ordered to the Naval Academy.

Stokes, C. F., surgeon, detached from the Naval Academy and ordered to the Naval Medical School Hospital, Washington, D. C., for duty.

Curl, H. C., surgeon, detached from duty at the Naval Medical School Hospital, Washington, D. C., April 24, and ordered to duty at the Naval Hospital, Canacao, P. I., via the *Buffalo*.

Jones, E. L., asst.-surgeon, detached from the *Maryland* and ordered to the Naval Recruiting Station, Dallas, Tex.

Chambers, W., asst.-surgeon, detached from the Naval Recruiting Station, Dallas, Tex., and ordered to the *Maryland*.

Heiner, R. G., P. A. surgeon, detached from *Pennsylvania* and ordered to the *Albany*.

Biello, J. A., asst.-surgeon, detached from duty at the Naval Hospital, Mare Island, Cal., and ordered to the *Vicksburg* when commissioned.

Stibbens, F. H., asst.-surgeon, detached from *Albany* and ordered to *Pennsylvania*.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commisioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended April 14, 1909:

Irwin, Fairfax, surgeon, relieved from duty on the revenue cutter *Snohomish* and directed to report to the commanding officer of the revenue cutter *Rush* for duty.

Wertenbaker, C. P., surgeon, relieved as chairman of board of medical officers convened under bureau order of April 5, 1909.

Gardner, C. H., P. A. surgeon, granted 3 days' leave of absence from April 8, 1909.

Sprague, E. K., P. A. surgeon, granted 7 days' leave of absence from April 8, 1909.

Hobdy, William C., P. A. surgeon, on being relieved by P. A. surgeon Frederick E. Trotter, directed to proceed to Honolulu, T. H., and assume command.

King, Walter W., P. A. surgeon, relieved from duty at the Marine Hospital, San Francisco, and detailed for duty in the examination of arriving aliens at San Francisco.

Goldberger, Joseph, P. A. surgeon, directed to proceed to Richmond, Va., on special temporary duty.

Trotter, Frederick E., P. A. surgeon, on being relieved by P. A. Surgeon Walter W. King,, assume command of San Francisco Quarantine Station, Angel Island, Cal.

Ebersole, R. E., P. A. surgeon, granted 7 days' leave of absence from Feb. 27, 1909, under paragraph 191, Service Regulations.

Collins, G. L., P. A. surgeon, detailed as chairman of board of medical officers convened under bureau order of April 5, 1909.

Stiles, Charles Wardell, chief of division of zoology, hygienic laboratory, granted 1 day's leave of absence in March, 1909, under paragraph 211, Service Regulations.

Kastle, Joseph H., chief division of chemistry, hygienic laboratory, granted 2 days' leave of absence in March, 1909, under paragraph 211, Service Regulations.

Blanchard, J. F., acting asst.-surgeon, granted 3 days' leave of absence from April 3, 1909.

Onuf, B., acting asst.-surgeon, granted 7 days' extension of annual leave on account of sickness from March 29, 1909.

Tappan, J. W., acting asst.-surgeon, granted 5 days' extension of annual leave on account of sickness from March 11, 1909.

APPOINTMENT

Dr. Samuel C. Hotchkiss commissioned as asst.-surgeon in the Public Health and Marine-Hospital Service.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 16, 1909.

SMALLPOX—UNITED STATES

Alabama: Antaugua county, to April 5, 11 cases; Pottsville, Feb. 7-April 5, 3 cases; Montgomery, March 26-April 2, 1 death.
California: Los Angeles, March 20-27, 1 case; Sacramento, 1 case; San Francisco, 1 case.
District of Columbia: Washington, March 27-April 3, 1 case.
Georgia: Macon, March 28-April 4, 2 cases.
Illinois: Canton, Jan. 1-March 1, 50 cases; Chicago, March 27-April 3, 1 case; Danville, March 29-April 4, 7 cases; Fulton county, general, Jan. 1-March 1, present; Peoria, March 27-April 3, 12 cases.
Indiana: Kokomo, Jan. 20-March 7, 14 cases, 8 deaths; Muncie, March 27-April 3, 1 case; South Bend, 1 case.
Iowa: Cedar Rapids, March 1-31, 13 cases.
Kansas: Kansas City, March 27-April 3, 1 case; Topeka, March 20-27, 15 cases; Wichita, March 27-April 3, 1 case.
Kentucky: Berea, Feb. 1-April 5, 20 cases; Covington, March 27-April 3, 8 cases.
Louisiana: New Orleans, March 27-April 3, 2 cases.
Minnesota: Minneapolis, March 13-27, 5 cases.
Missouri: St. Louis, March 27-April 3, 2 cases.
New Jersey: Camden, March 27-April 3, 3 cases; Hightstown, March 3, 1 case, imported; New Brunswick, March 27-April 3, 3 cases; Paterson, March 6-April 5, 8 cases; Plainfield, March 29-April 5, 1 case; Woodbridge, March 6, 1 case.
New York: New York, March 27-April 3, 4 cases.
Ohio: Cincinnati, March 19-April 2, 10 cases; Cleveland, March 26-April 2, 1 case.
Tennessee: Knoxville, March 28-April 3, 3 cases.
Texas: Corpus Christi, April 2, present; Fort Worth, March 1-31, 10 cases; San Antonio, March 27-April 3, 4 cases.
Wisconsin: La Crosse, March 27-April 3, 2 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, Feb. 20-27, 5 cases.

SMALLPOX—FOREIGN

Brazil: Bahia, Feb. 13-27, 15 cases, 1 death; Pernambuco, Feb. 1-15, 11 deaths.
Canada: Halifax, Feb. 13-27, 5 cases.
China: Hongkong, Feb. 13-27, 4 cases; Shanghai, Feb. 28-March 6, 1 death; Tientsin, Feb. 20-27, 1 case.
Egypt: Alexandria, Feb. 18-25, 1 death; Cairo, Feb. 18-25, 27 cases, 17 deaths.
France: Paris, March 6-20, 6 cases.
Great Britain: Bristol, March 13-20, 1 case, 1 death.
India: Bombay, March 2-9, 19 deaths; Calcutta, Feb. 20-27; 332 deaths; Madras, Feb. 27-March 5, 1 case; Rangoon, Feb. 20-27, 7 deaths.
Indo-China: Saigon, Feb. 6-13, 1 case, 1 death.
Italy: General, March 13-21, 14 cases; Catania, March 6-20, 2 cases; Genoa, Feb. 1-28, 5 cases; Naples, March 14-21, 2 cases; Palermo, Feb. 28-March 6, 2 cases.
Japan: Formosa, Feb. 13-March 13, 9 cases; Kobe, March 6, 1 case, 1 death.
Java: Batavia, Feb. 13-20, 5 cases, 1 death.
Malta: Feb. 13-20, 1 death.
Mexico: Guadalajara, March 18-25, 5 cases; Monterey, March 21-28, 4 cases; Veracruz, March 21-27, 1 case, 1 death.
Netherlands, The: Rotterdam, March 20-27, 1 death.
New Foundland: St. John, March 13-20, 1 case.
Russia: Moscow, March 6-20, 54 cases, 17 deaths; Odessa, March 6-13, 1 case; Riga, March 6-20, 6 cases; St. Petersburg, Feb. 20-March 6, 23 cases, 5 deaths.
Spain: Almeria, Feb. 1-28, 2 deaths; Barcelona, March 8-22, 7 deaths; Valencia, March 12-19, 1 death.
Straits Settlements: Singapore, Feb. 13-20, 1 death.
Uruguay: Montevideo, Jan. 1-31, 1 death.

YELLOW FEVER

Barbados: General, March 22-27, 3 cases.
Brazil: Bahia, Feb. 13-27, 14 cases, 6 deaths; Para, March 6-13, 5 deaths; Pernambuco, Feb. 1-15, 1 death.
Ecuador: Guayaquil, March 6-13, 10 deaths.

CHOLERA—INSULAR

Philippine Islands: Provinces, Feb. 20-27, 48 cases, 34 deaths.

CHOLERA—FOREIGN

India: Calcutta, Feb. 20-27, 40 deaths; Madras, Feb. 27-March 5, 2 deaths; Rangoon, Feb. 20-27, 7 deaths.
Russia: Saratov, March 21, 1 case; St. Petersburg, March 19-26, 19 cases, 4 deaths.
Straits Settlements: Penang, Feb. 10-27, 1 case; Singapore, Feb. 13-27, 3 cases.

PLAGUE

Brazil: Bahia, Feb. 13-27, 6 cases, 2 deaths.
Chile: Magillones, March 10, epidemic.
China: Hongkong, Feb. 6-27, 6 cases, 5 deaths.
Ecuador: Guayquil, March 6-13, 6 deaths.
India: General, Feb. 20-27, 4,717 cases, 3,750 deaths; Bombay, March 2-9, 197 deaths; Calcutta, Feb. 20-27, 36 deaths; Rangoon, 17 deaths.
Japan: Formosa, Jan. 23-March 13, 223 cases, 187 deaths; Kobe, Feb. 27-March 6, 1 death.
Turkey: Jiddah, March 15-21, 16 cases, 16 deaths.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

Am. Assn. of Genito-Urinary Surgeons, Pocona, Pa., May 31-June 1.
American Gynecological Society, New York, May 27-29.
American Neurological Association, New York, May 27-29.
American Pediatric Society, Lenox, Mass., May 27-28.
American Therapeutic Society, New Haven, Conn., May 6-8.
Association of American Physicians, Washington, D. C., May 11-12.
Arizona, Medical Association of, Prescott, May 19-20.
Arkansas, Medical Society of, Pine Bluff, May 18-21.
Connecticut State Medical Society, Hartford, May 26-27.
District of Columbia, Medical Assn. of, Washington, April 27.
Illinois State Medical Society, Quincy, May 18-20.
Iowa State Medical Society, Dubuque, May 19-21.
Kansas State Medical Society, Emporia, May 5-7.
Louisiana State Medical Society, New Orleans, May 4-6.
Maryland, Med. and Chir. Faculty of, Baltimore, May 13-15.
Missouri State Medical Association, Jefferson City, May 18-20.
Montana State Medical Association, Missoula, May 12-13.
Nat. Assn. for Study and Prevention of Tuberculosis, Washington, D. C., May 13-15.
Nebraska State Medical Association, Omaha, May 4-6.
New Hampshire Medical Society, Concord, May 13-14.
North Dakota State Medical Association, Fargo, May 11-12.
Ohio State Medical Association, Cincinnati, May 5-7.
Texas State Medical Association, Galveston, May 4-6.

TENNESSEE STATE MEDICAL ASSOCIATION

Seventy-sixth Annual Meeting, held at Nashville, April 13-15, 1909

The President, B. D. BOSWORTH, Knoxville, in the Chair

After addresses of welcome on behalf of the city, by Mr. J. S. Brown, Mayor of Nashville, and Dr. John A. Witherspoon, on behalf of Davison County Medical Society, with a response to these addresses by Dr. George R. West, Chattanooga, the reading of papers was proceeded with.

Officers Elected

The following officers were elected for the ensuing year: President, Dr. Jere L. Crook, Jackson; vice-president for middle Tennessee, Dr. T. J. Coble, Shelbyville; vice-president for east Tennessee, Dr. C. H. Davis, Knoxville; vice-president for west Tennessee, Dr. O. Dulaney, Newbern; secretary, Dr. George H. Price, Nashville, re-elected; treasurer, Dr. W. C. Bilbro, Murfreesboro, re-elected.

Memphis was selected as the place for holding the next annual meeting; time, second Tuesday in April, 1910.

Squint and Its Treatment

DR. WALTER DOTSON, Gallatin: The commonest cause of squint is some refractive error. To overcome this error, the

muscles of accommodation are overworked, thus producing pathologic changes. The same pathologic change may be transmitted to the extraocular muscles by the same nerve supply. We should estimate under a cycloplegic, the refractive error, and correct it with lenses. We should test the strength of each extraocular muscle, and operate on the one which is at fault. If the rectus on the squinting side is abnormally strong or abnormally short, or both, then Panas' operation should be performed on it. If the recti on the opposite side of the squint are abnormally weak, or abnormally long, or both, then a Valk tucking operation should be done. If both internal and external recti muscles are at fault, then the required operation should be done on each muscle of the squinting eye, but never on both eyes.

DISCUSSION

DR. G. C. SAVAGE, Nashville: In March, 1893, in the *Ophthalmic Record*, I described my operation for shortening the rectus muscle. This operation is simple, effective, and free from the two prominent risks incurred in any of the advancement operations. In this, as in many other operations on the eye, cocain anesthesia can be relied on. The first step of the operation consists of a vertical conjunctival incision one-eighth of an inch behind the insertion of the tendon, and a little longer than the muscle is wide. From the lower extremity of this cut a horizontal conjunctival incision is made one-quarter inch long, near to, and parallel with the lower border of the muscle. The triangular flap of conjunctiva is now dissected up, and is held out of the way by an assistant. The second step consists in passing a strabismus hook beneath the tendon and in making a slight dissection of the connective tissue and capsule of Tenon at the upper and lower border of the muscle. The last step is the taking of the stitch for shortening the muscle. A thread is armed with two needles slightly curved. One needle is passed through the muscle from its outer surface and is brought out beneath the lower border of the muscle, the other is passed in the same way, but is brought out beneath the upper border of the muscle. The amount of tissue thus included in the loop need not be more than one-quarter the width of the muscle; and the distance of this loop behind the insertion of the tendon must depend on the amount of shortening desired. The muscle is held away from the globe by fixation forceps, while the needles are being passed as above indicated. The operator, taking a hook in his hand, draws it slightly back and at the same time gently lifts the tendon from the globe. He then takes needle No. 1 and pierces the tendon from the ocular side, at its point of insertion and between the center and its lower border, bringing it out through the conjunctiva over the insertion, then removes the needle. In a similar way needle No. 2 is passed through the tendon beneath its center and upper border, and is brought out through the conjunctiva over the insertion. This needle is then removed. The two ends of the one thread need not be more than one-eighth of an inch apart, as they emerge from the tendon. On tying the knot in the usual way, that part of the muscle at the loop is brought in contact with the tendon at its insertion, and is there confined by completing the knot. The triangular flap of conjunctiva is then allowed to fall and cover in the exposed muscle, including its "tuck." The stitch is allowed to remain from four to six days, depending on the inflammatory action excited. The stitch will excite sufficient inflammation to bind the parts in their new relationships and thus the shortening is made permanent. As in advancements, so in the shortening, it is found necessary to do either a partial or a complete tenotomy of the opposing muscle.

Under date of Aug. 15, 1895, Dr. Valk writes: "I have no doubt that you (Dr. Savage) are fully entitled to the credit for what seems to be an excellent operation."

DR. W. DOTSON: I have never heard of this operation until I saw Dr. Valk do it. He told me it was his operation, and I read a description of it in his book. I was firmly impressed with the fact that it was Valk's operation until Dr. Savage established his priority.

Surgery of the Thyroid

DR. R. M. MCCOWN, Knoxville: In exophthalmic goiter, to say that surgical procedure is best is not enough. Operation is indicated in all cases that do not show a degenerated heart muscle, with irregular pulse, low blood pressure and periodical attacks of delirium cordis, and in those cases associated with an enlarged thymus. A mistake often made is not operating early. Early operation in the hands of competent surgeons in the past few years has materially reduced the mortality, in that it has ranged from 2 to 4 per cent., which is not greater than in the majority of all capital operations, and the percentage of cures ranges from 5 to 90 per cent. Halsted reports 90 cases, with only 2 deaths; Mayo, 176 operations, with 8 deaths, and 70 per cent. cures. In his last 75 cases Mayo reports only one death. Kocher reports 153 cases, with 2 deaths, and 83 per cent. cures. The question of anesthesia is one of personal preference. I prefer general anesthesia. In removing the gland there should be as little maceration of gland substance as possible, because the gland juices may increase the symptoms.

DISCUSSION

DR. WILLIAM D. HAGGARD, Nashville: It has long been supposed that goiter bears a causal relation to the water supply, and it has been found that if the water is filtered, it depreciates the incidence of goiter. Of 13 individuals who took the filtrate, 4 contracted goiter. It was afterward observed that if the same filtrate were boiled for ten minutes, the patients to whom it was administered would not develop goiter. Therefore, there is undoubtedly in the sediment some bacteria with which we are not yet acquainted, and which may bear a causative relation in the production of goiter. Selection of cases for operation is important. Patients with swollen feet, ascites, etc., should not be operated on as they are likely to die within a few weeks or months. They should be left alone until perchance the superior thyroids alone can be ligated, and this can be done under local anesthesia, and within a few weeks or months thereafter the enlarged gland can be removed with safety. I agree with Dr. McCown that all patients with exophthalmic goiter should be operated on while the condition is in its incipiency, if possible. Only the largest part of the gland should be removed, never the entire gland, because then the patient gets myxedema.

DR. BATLE MALONE, Memphis: Dr. McCown failed to call attention to one form of medical treatment which is of value. Senn, in his text-book on "Pathology and Treatment of Tumors," speaks of the use of iodin in simple hypertrophy of the gland, and states positively that when we have this condition without tumor formation, goiter will disappear under the use of iodin, and I have found this to be true. While Halsted of Baltimore has done a great many of these operations under local anesthesia, I prefer general anesthesia.

DR. L. E. BURCH, Nashville: The mortality from operations in cases of exophthalmic goiter in the hands of the best surgeons is about 5 per cent. In the ordinary form of goiter it is about 2 per cent. The most important part in the operation is not only a judicious selection of cases, but the time of operation and the proper preparation of the patient. In the exophthalmic cases we should strive to avoid gastric crises. Accordingly, patients should be put to bed, and an icebag applied over the heart. They should be kept quiet and chloral and bromids given. The great danger from the operation is tetany, which will not occur if the operation is carefully performed.

DR. R. E. FORT, Nashville: We should avoid the application of the *x*-ray in cases of goiter, because it produces a fibrous condition of the gland, rendering its subsequent removal exceedingly difficult. The mortality is increased by the use of the *x*-ray. While Kocher and other surgeons have operated on a large number of cases of goiter under local anesthesia, I think the general trend is toward general anesthesia.

DR. R. M. MCCOWN: I wish to report briefly two cases of goiter that have come under my observation in the last six

months. One patient, a woman of 30, had tachycardia, enlargement of the lateral lobe, and heart beat of 120. The left lobe was somewhat enlarged. She was extremely nervous, irritable, and presented a tremor. I ligated the superior thyroid artery and enucleated the gland, which was very much atrophied. The nervousness is disappearing, and she has been very much improved. In the other case I removed the goiter under general anesthesia about six months ago, and the patient has made very rapid improvement.

(*To be continued*)

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS

Ninth Annual Meeting, held in Boston, April 9-10, 1909
(Continued from page 1277)

Pathology of Arthritis Deformans

DRS. E. H. NICHOLS and F. L. RICHARDSON, Boston: This paper describes two pathologic types of the disease, though there are not two distinct etiologic groups to correspond. The first is the proliferative, the second the degenerative type. In the former there is proliferation of connective tissue of the synovial membrane over the cartilages; the latter may be destroyed with the possible union of the bones. Changes in the shafts of the bones are secondary to those in the joint. In the second type, which is more common in old people, there is degeneration of articular cartilage. This begins as a fibrillation at right angles to the surface, the cartilage cells change and finally disappear until the bone may be reached. The endosteum of the spongy bone proliferate and eburnated bone forms. Then occurs a new growth of perichondrium. Ankylosis may occur from irregularity in the surfaces, even though they are not united.

Anatomy of Senile Dementia

DR. E. E. SOUTHARD, Boston: Among 247 cases of insanity as diagnosed by several clinicians, were 42 of senile dementia. Of these, 29 brains were below normal in weight, 16 being evidently atrophy of the brain. In 5 the weight ratios were compared as in Vierordt's tables, and 3 were found opposed to the other two. Of the great group of senile dementia, many cases should be given another name to indicate the true condition.

Abnormality of Epidermal Hornification Due to Obliterative Changes in the Veins of the Corium

DR. OSCAR T. SCHULTZ, Cleveland: In cases of psoriasis and similar affections, the literature contains descriptions of the superficial structures but nothing is said of changes in the deeper parts of the corium. My specimens show this to be a prominent lesion. There is first a proliferation of endothelium, then of cells around the vessels until, finally, the veins are obliterated. It appears probable that this leads to the changes found in the superficial structures, such as edema, parakeratosis, and others as commonly described.

Chronic Skin Lesions, Due to Repeated Exposures to the X-Rays, Including X-Ray Carcinoma

DR. S. BURT WOLBACH, Albany: Cases of chronic *x*-ray dermatitis are common and thirty-six cases of carcinoma following this condition in *x*-ray workers have been reported. Clinically, there is thickening of the epidermis, then a scaly condition of the skin, and finally an infiltrating carcinoma. The use of phosphotungstic acid hematoxylin aids greatly in studying the histology of these cases. Microscopically, there is no evidence that the epidermis is greatly susceptible to the *x*-ray. The deeper tissues, such as endothelium, connective tissue, and smooth muscle fibers are much more susceptible. The changes in these are: 1. Obliteration of vessels by degeneration and proliferation of endothelium. The muscle coat of the vessels also degenerates and its place is taken by connective tissue. This begins in the small vessels and finally involves the larger ones. 2. The formation of foci of degeneration due to obliteration of vessels. The larger of these foci lead to ulceration. 3. Downward proliferation of epithelium into and around the areas of degeneration. The production of tumors can not be ascribed to primary action of the *x*-rays on the epithelium.

DISCUSSION

DR. A. S. WARTHIN, Ann Arbor: Has Dr. Wolbach noted any difference in the type of the carcinomas studied? I have observed an instance in a medical student, treated for lupus, in which a growth appeared two years later. This proved to be a basal-celled epithelioma originating in the sebaceous glands and bearing no relation to the superficial epithelium.

DR. WOLBACH: The three cases of tumor I studied were of the epidermoid type.

Transplantation of Devitalized Arterial Segments; Morphologic Changes in the Implanted Segments

DRS. ISAAC LEVIN and JOHN H. LARKIN, New York: Specimens from three series of experiments on the aortas of dogs were shown. The technic was a slight modification of that employed by Carrel. Histologic studies of tissues from 24 hours to 10 weeks after transplantation were made. They showed the occurrence of gradual changes in the introduced segment, leading to the disappearance of the various structures and the formation of a fibrous tube around it which finally occupied its place. Calcareous infiltration also occurred in some instances. In the dog which lived for ten weeks, anastomotic circulation had formed. Blood had evidently passed through, and remained fluid, for several days before a thrombus formed, showing that living endothelial cells are not necessary as a boundary.

Behavior Toward Filariæ of Tissues of Cattle Inoculated with Cultures of Human Tubercle Bacilli

DR. THEOBALD SMITH, Boston: Flattened nodules were found on the omentum of cattle after injections of human tubercle bacilli and in these nodules were filariæ, either degenerated or in a healthy condition. This form is not known to be a stage in the life of the filaria and the possible explanation is that under the influence of injections of tubercle bacilli the filariæ are stimulated, or are collected in the focus of proliferation of the tubercle bacillus. The practical point is that possibly filariæ in the human being become annoying at times because of the influence of other infections in the host.

Viability of the Tubercle Bacillus

DR. THEOBALD SMITH, Boston: Cultures of a strain of the tubercle bacillus which had been carried along for years were made and placed in the refrigerator for fourteen months, when the bacilli were still living and virulent. One tube was kept twelve months in the refrigerator and then the bacilli lived seven months in salt solution. Very few of the bacilli were alive, hence it was the case of one bacillus in one thousand or in ten thousand possessing an exceptional vitality.

Rapid Diagnosis of Rabies with Special Reference to Lesions in Gasserian Ganglion

DR. LANGDON FROTHINGHAM, Boston: Assuming that Negri bodies are diagnostic of rabies, the rapid demonstration of them is a point of great importance. They can always be found in the cells of Ammon's horn and the question arose as to whether those cells would adhere to a slide if it were pressed against the fresh tissues. This was tried and found to work satisfactorily. The best method of treating the films is to plunge them at once into methyl alcohol, which instantly fixes them. They are then stained by Van Giesen's method one minute. The red cells do not stain by this method, which prevents confusing them with the bodies. When the brain can not be obtained then the posterior root ganglia or the Gasserian ganglion must be employed. I have made a systematic study of the latter in 700 animals and find two types of lesions: 1. The typical or focal lesion. The ganglion cells are destroyed and their place taken by cells of the endothelial type; the nucleus may be little or not at all affected. 2. The atypical or diffuse lesion is a diffuse infiltration between the ganglion cells of a connective tissue type of cell. The lesions in the Gasserian ganglion are therefore not specific for rabies.

DISCUSSION

DR. W. T. HOWARD, Cleveland: In one case a dog bit three groups of children. In the Ammon's horn of the dog were Negri bodies. The children were given the Pasteur treatment. One died some time later with symptoms suggesting meningitis. Neither Negri bodies nor rabic tubercles could be found and the Gasserian ganglia were normal. A guinea-pig was inoculated with material from the medulla and soon died. No Negri bodies were found in its brain. A second pig was inoculated with the medulla of the first pig and died; it also showed no Negri bodies. The medulla of the second pig inoculated into a rabbit caused typical rabies and in its tissues Negri bodies were found.

(To be continued)

Medical Education and State Boards of Registration

COMING EXAMINATIONS

FLORIDA: Tallahassee, May 19-20. Sec., Dr. J. D. Fernandez, Jacksonville.
GEORGIA: Regular: Capitol Bldg., Atlanta, April 30-May 1. Sec., Dr. E. R. Anthony, Griffin. Homeopathic: Atlanta, May 1. Sec., Dr. R. E. Hinman, 153 Whitehall St.
LOUISIANA: Regular: New Orleans, May 20-21. Sec., Dr. Felix A. Larue, 211 Camp St. Homeopathic: 919 St. Charles St., New Orleans, May 3. Sec., Dr. Gayle Aiken, 1102 St. Charles Ave.
MASSACHUSETTS: State House, Boston, May 11-13. Sec., Dr. Edwin B. Harvey, Room 159, State House.
MISSISSIPPI: State Capitol, Jackson, May 11-12. Sec., Dr. S. H. McLean.
MISSOURI: Kansas City, May 17-19. Sec., Dr. J. A. B. Adcock, Warrensburg.
NEBRASKA: State Capitol, Lincoln, May 25-27. Secretary, Dr. E. J. C. Sward, Oakland.
NEVADA: Carson City, May 3. Sec., Dr. S. L. Lee.
NEW YORK: Albany, May 18-21. Dr. Charles F. Wheelock, Albany.
TENNESSEE: Nashville, Memphis, Knoxville, May 4-5. Sec., Dr. T. J. Happel, Trenton.

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION

Fifth Annual Conference, held at the Auditorium Hotel, Chicago, April 5, 1909

Besides the members of the Council, 90 delegates were present, representing 21 state examining boards, 15 state medical societies, 2 departments of the government services, 1 confederation of examining boards, 1 college association and 3 national medical associations, as well as 35 medical and liberal arts colleges.

CHAIRMAN'S ADDRESS

The conference was called to order at 10 a. m., by the chairman, Dr. Arthur Dean Bevan, who delivered the following address:

Gentlemen, Delegates from the state licensing bodies, from the state medical societies, from the National Institute of Homeopathy, from the National Eclectic Medical Association, from the medical college associations, from the confederations and associations of state licensing boards, from the United States Army and Navy Medical Corps and the Public Health and Marine-Hospital Service, from the schools of liberal arts, officers of the American Medical Association and invited guests.

The Council on Medical Education of the American Medical Association has invited you to this fifth annual conference to discuss the subject of medical education and to ask your advice and cooperation in the effort to elevate the standards of medical education in this country.

It might be well to briefly review the work of the four previous conferences. The first annual conference was held in Chicago April 20, 1905. At this conference the questions of preliminary education, medical curriculum and the relation of the college of liberal arts to the medical school were discussed. As a result of this discussion the Council formulated as the minimum standard of the American Medical Association the following:

MINIMUM STANDARD

(*a*) A preliminary education sufficient to enable the student to enter the freshman class of our recognized universities; (*b*) The passing on the credentials of such an education by a state official; (*c*) The graduation from an approved medical college requiring a four years' course of not less than 30 weeks each year with 30 hours each week, of actual work. (*d*) The passing of an examination for licensure before a state board.

IDEAL STANDARD

The Council further formulated a so-called ideal standard which should be secured as rapidly as the conditions throughout the country warranted. This ideal standard was briefly as follows:

(*a*) A four year high school education, (*b*) a year's university training in physics, chemistry and biology, (*c*) four years of medicine proper, and (*d*) one year as interne in a hospital or dispensary.

THE SECOND CONFERENCE

At the second conference, held in Chicago, May 12, 1906, these standards were restated and probably the most important facts presented were the standings of the various medical colleges based on the failures of their graduates in examinations before state boards. The colleges were divided into three groups: Group I, colleges having less than 10 per cent. of failures; Group II, colleges having from 10 to 20 per cent.; and Group III, colleges having above 20 per cent. A fourth unclassified list was made of those colleges which had insufficient data to permit of comparison. These reports have been productive of much good in stimulating faculties to guard against the graduation of illy prepared students.

THE THIRD CONFERENCE

At the third conference, held in Chicago, April 29, 1907, a detailed report of a personal inspection made by members of the Council of all the medical schools of the United States was presented. In this inspection the schools were marked on a civil service basis consisting of ten points covering the essentials of a modern medical college, these 10 points making a possible 100. And on this basis the colleges as graded were divided into three groups. The result was as follows: An acceptable group of 82 colleges with marks from 70 to 100, a conditioned group of 46 colleges with marks from 50 to 70, and a rejected group of 32 colleges with marks below 50.

This personal inspection of colleges is being continued and the second inspection will soon be completed.

THE FOURTH CONFERENCE

The fourth annual conference held in Chicago, April, 1908, was from many standpoints the most encouraging and interesting of the series. The secretary, Dr. N. P. Colwell, was able to show, in a graphic study of medical education in the various states of the Union and in the twenty most important countries of the world, the comparative position of medical education in this country with that of the rest of the world. While many deficiencies were disclosed it was shown that more than fifty first-class schools in this country had agreed to accept what has been adopted by all the rest of the world, i. e., a five year medical course. This is to be brought about by adding to our present preliminary requirements of a four year high school course, at least one year of physics, chemistry and biology.

This advance requirement has become so general that it will doubtless be adopted by all first-class schools within the next few years and thus place American medical education on a par with that of England, France, Germany, Austria, Canada—in fact, with that of all our neighbors and rivals in progress and civilization.

In the study of medical education in this country, as we compare the existing conditions with those existing in Germany and England, we are shocked by our many short-comings. However, we are tremendously encouraged by the progress that has been made in the last five or ten years, and are urged to redouble our efforts to secure uniform and acceptable American standards. This can be done only by wiping out of existence a large number of alleged medical colleges which at present disgrace American medicine.

AGENCIES AT WORK

In this effort to elevate standards and secure acceptable conditions in medical education many agencies are doing splendid work: The medical colleges themselves, the associations of medical colleges, the universities and colleges of liberal arts, the confederations of state boards, the medical societies, etc. Such conferences as we are having to-day also have much weight, and yet, after all has been said, the clear and definite fact remains that the legal power to control and elevate the standards of medical education rests entirely and alone with the state boards. It is in the power of the state boards to

so raise the preliminary requirements and to exact such fair and complete medical preparation as to secure for such states competent medical practitioners. While in some states the conditions of general education and public opinion are not such as would warrant the immediate exaction of proper standards, in most states the conditions would warrant such a stand at the present time. In the Middle West, for instance, if such states as Ohio, Indiana, Michigan, Illinois, Kentucky, Wisconsin and Iowa should do as is to be done in Minnesota, North Dakota, South Dakota and Colorado, demand of their medical men a higher preliminary education, including thorough work in physics, chemistry and biology, public and professional opinion would doubtless unanimously support them in such a position. Then the battle for higher medical standards in this country would be practically won. Even in the other states the general educational advance is such that proper standards can be demanded within the next few years.

Most of you are familiar with the fact that our northern neighbor, Canada, has just added the preliminary science year to her medical curriculum.

COLLEGE MERGERS

Another encouraging fact to be noted is the mergers being made among medical schools whereby stronger schools are resulting. Notably in Indiana, all of the regular schools in the state merged into the medical department of Indiana University, while in Kentucky all of the medical schools merged into the University of Louisville. In Cincinnati the two regular schools merged into the University of Cincinnati; in Minnesota Hamline merged into the medical department of the University of Minnesota.

There are numerous other cities where mergers might be brought about if those interested in general education and those in medical education in each city would work together to secure them. For example, if all the medical colleges of any large city, such as Chicago, Philadelphia, St. Louis or others could be merged into one great university medical school, such as are to be found in Berlin, Paris or Vienna, it would be of the greatest possible advantage to medical education in America.

In the evolution of general and medical education in this country it is becoming more and more evident that a well-rounded university needs a strong medical department and it is now equally clear that a medical school can not reach the highest stage of its development except as the medical department of a strong university. It is evident that within a few years the medical schools of this country will, with few exceptions, be the medical departments of universities. Fortunately for the medical school, the university needs the medical school quite as much as the medical school needs the university, so that almost any independent medical school of real merit can secure desirable union with a university. And this change will solve most of our present problems in medical education.

PRESENT DEMANDS

Briefly, what does the present situation of medical education demand for a satisfactory solution?

1. The passing of commercial medical schools and the merging of the better schools to form strong medical departments of universities.

2. Endowments both private and state for the proper maintenance of such medical departments. The experience of the last few years has shown clearly that the modern medical school needs such endowments, as it can not be properly supported on the fees of students, and it has been demonstrated that such endowments can not be secured for the independent medical schools.

3. As the most important public health measure each state should demand through its state licensing board complete and thorough medical preparation of those seeking to practice medicine within its boundaries. This must include (*a*) a proper preliminary education, (*b*), a thorough medical course pursued in a reputable medical college, and (*c*) a practical and thorough examination such as will be an actual test of applicant's ability to practice medicine.

The program of to-day consists of three topics: The report of a committee of 100 on the medical curriculum, the desirability and value of such curriculum, necessary equipment, etc., from the state board standpoint, and the question of making the state board examination more of a practical test of the candidate's ability to practice medicine.

This conference is purely informal. Its purpose is to elicit the widest possible discussion of the topics considered. It is hoped that all delegates will take an active part in the discussions. It is my great pleasure to welcome you all in the name of the American Medical Association.

(To be continued)

Medical Education and Nostrums, Eighth Letter

This is the eighth of a series of letters issued jointly by the Council on Medical Education and the Committee on Medical Teaching of the Council on Pharmacy and Chemistry:

To Medical Teachers:—This letter contains some suggestions for the departments of chemistry, biochemistry and dietetics. Failure on the part of students to obtain a practical grasp of these fundamental sciences is the failure of a most powerful protection against the nostrum evils.

Chemistry.—Unscrupulous manufacturers traffic in the assumed ignorance of the medical profession concerning the most elementary facts of chemistry. Indefinite mixtures are given the appearance of scientific discoveries by endowing them with fictitious chemical formulas (see report on Acetanilid Mixtures, THE JOURNAL, June 3, 1905, p. 1791); or the true formula, or a correct but unusual chemical name, is used to mystify the physician and to conceal the nature of constituents which are commonly known under other names, for instance, Alleotone (THE JOURNAL, Oct. 17, 1908, p. 1346). The success of these practices reflects unfavorably on the efficiency of our chemical teaching. It is not to be expected that medical students can be trained into expert chemists in the time at our disposal; but it would be quite practical to point out the more obvious and common of these pitfalls, and thus guard them from many absurd situations. The "Propaganda" pamphlets contain the most conspicuous examples of these practices. These could be introduced as a diversion, say under the subject of acetanilid and referred to incidentally in other parts of the course, without taking up a serious amount of time. The discussion of some of the reports of the Association Laboratory could be made the basis of some instructive seminars in practical analytical chemistry.

Biochemistry.—The twilight state of our knowledge of ferment-action is peculiarly congenial to the mystery-cult of the nostrum-maker. The report on the Reed & Carnrick preparations would serve as a good illustration of the absurdity of over-speculation. We do, however, know certain empirical facts about ferments, which some manufacturers find it profitable to ignore. The mutually destructive action of pepsin and trypsin is a prominent example (see "Digestive Impossibilities," THE JOURNAL, Feb. 9, 1907, p. 533). The inferior digestive power of these and other proprietary mixtures, the variability of the ordinary preparations, as also the practical inactivity of the pretended ferments from unusual sources, such as the "nucleo-enzymes" and ingluvin (THE JOURNAL, July 11, 1908, p. 142); all these are matters of profitable interest to the student and could be demonstrated with little trouble. He should also be warned against the statements of digestive strength, based on biased methods, as shown in the report of the Council on diastase ferments (THE JOURNAL, July 11, 1908, p. 140).

The important fact that substances can not be supposed to act directly on the body unless they are absorbed can be conveniety demonstrated with some of the formaldehyd derivatives (THE JOURNAL, Sept. 5, 1908, p. 818).

Dietetics.—It is very important that students should be cautioned that many of the so-called "medicinal" liquid foods have practically no nutrient value, and that a patient is more easily starved than fed with them (THE JOURNAL, May 11, 1907, p. 1612). Similarly, the fact should be emphasized that "cod-liver oil without the grease" can not act as a nutrient (THE JOURNAL, Oct. 13, 1906, p. 1207).

Marriages

STEPHEN S. BARAT, M.D., to Miss Louise Clingman, both of Chicago, April 17.

HOWARD LEWIS, M.D., Elida, Ohio, to Miss Josephine Saunier, of Cincinnati, April 5.

R. C. PAISLEY, M.D., New Athens, Ohio, to Miss Pollock, of near Uniontown, Ohio, April 21.

GEORGE F. JUENEMANN, M.D., U. S. Army, to Miss Ruby Mulkey Ireland, at Pasadena, Cal., March 18.

NATHANIEL T. DULANEY, M.D., Blountville, Tenn., to Miss Mary Emma Gammon, of Bristol, Tenn., April 7.

Deaths

Harry Ogden Fairweather, M.D. Albany (N. Y.) Medical College, 1896; captain and assistant surgeon, Second Infantry, N. G. N. Y.; rhinologist and laryngologist to Troy Hospital, St. Vincent's Orphan Asylum, and the House of the Good Shepherd, Troy; a member of the Association of Military Surgeons of the United States and a veteran of the Spanish-American War; treasurer of the local board of United States Pension Examiners; a captain in the Troy volunteer fire department; died at the Troy Hospital, April 8, from the effect of a fracture of the base of the skull, sustained in a fall from a ladder while engaged in fighting a fire, two days before, aged 35.

Allen Vinton Smith, M.D. Rush Medical College, Chicago, 1880; assistant surgeon of the Eighth Ohio Infantry, U. S. V., during the Spanish-American War; a member of the Association of Military Surgeons of the United States; visiting surgeon to the Aultman Hospital, Canton; and a member of the city council and health officer of Canton; died at his home in that city, April 10, from heart disease, aged 53.

George G. Farnandis, M.D. University of Maryland, Baltimore, 1852; physician to the Baltimore Almshouse from 1856 to 1859 and 1870 to 1875; demonstrator of anatomy at the University of Maryland in 1860; surgeon in the Confederate Service throughout the Civil War; professor of surgery in Washington University, Baltimore, from 1871 to 1873; died at his home in Baltimore, April 4, aged 80.

Louis Raoul Stark, M.D. New Orleans School of Medicine, 1867; a member of the American Medical Association; one of the founders of, and professor of gynecology in the University of Arkansas, Little Rock; a Confederate veteran and assistant surgeon general of the United Confederate Veterans; died at his home in Little Rock, April 10, from erysipelas, aged 67.

Benjamin Franklin Miesse, M.D. Bellevue Hospital Medical College, New York City, 1865; surgeon of the One-Hundred and Forty-ninth Ohio Volunteer Infantry during the Civil War; for two years health officer, and for seven years a member of the school board of Chillicothe, Ohio; died at his home in that city, April 3, from nephritis, aged 68.

Henry C. Potter, M.D. Albany (N. Y.) Medical College, 1844; and for a short time one of the health officers of Utica, N. Y.; a founder, builder and vice-president of the Pere Marquette system; for many years a resident of Saginaw, Mich.; died at the San Ysidro ranch, near Santa Barbara, Cal., April 3, from senile debility, aged 85.

Arthur Hyatt Clark, M.D. College of Physicians and Surgeons, New York City, 1877; a member of the Minnesota State Medical Association, and Southwestern Minnesota Medical Society; for many years health officer of Worthington, Minn., and local surgeon of the Rock Island System; died at his home March 4, from uremia, aged 61.

Elbert Gilbert Benson, M.D. Washington (D. C.) Homeopathic Medical College, 1896; president of the Eclectic Board of Medical Examiners of the District of Columbia, and a member of the Board of Medical Supervisors of the District; died at his home in Washington, March 27, from pneumonia, aged 50.

William Taylor Duncan, M.D. McGill University, Montreal, 1882; a member of the American Medical Association; city physician of Fergus Falls, Minn.; formerly a member of the city council and coroner of Ottertail county; died in his office, April 7, from an accidental gunshot wound of the head, aged 53.

Charles Ernest Lancaster, M.D. Medical School of Maine, Brunswick, 1888; a member of the local board of U. S. pension examining surgeons; died at his home in Brunswick, April 5, from paralysis, following an accident in which he was thrown from his carriage, three weeks before, aged 46.

Louis Benjamin Durocher, M.D. University of the Victoria College, Coburg, Ont., 1853; later a professor in that institution; and afterward a professor and emeritus professor and dean of the Medical Faculty of Laval University, Montreal; died at his home in that city, April 5, aged 78.

Louis Stern, M.D. University of Würzburg, Germany, 1878; of San Francisco; one of the founders and a member of the staff of the German Medical Society; a specialist on diseases of the eye, ear, nose and throat; died in the German Hospital, April 7, from heart disease, aged 55.

Jonas L. Kline, M.D. Bellevue Hospital Medical College, New York City, 1867; a veteran of the Civil War, and for more than thirty years a practitioner of Schuylkill county, Pa.; died at the home of his sister at Catasaqua, March 25, from cerebral hemorrhage, aged 72.

Albert William Neufield, M.D. College of Physicians and Surgeons, New York City, 1882; for many years chief pharmacist of the New York Dispensary; a fellow of the New York Academy of Medicine; died in Mount Sinai Hospital, New York City, April 11, aged 52.

Alva Buell Mayfield, M.D. Memphis (Tenn.) Hospital Medical College, 1893; a member of the State Medical Association of Texas; local surgeon of the Missouri, Kansas and Texas Railroad; died at his home in Mineral Wells, from uremia, February 14, aged 44.

Dewitt F. Ireland, M.D. Maryland Medical College, Baltimore, 1900; died in his office in Middlebourne, W. Va., April 4, from the effects of a gunshot wound of the heart, believed to have been self-inflicted with suicidal intent, aged about 40.

John L. Logan, M.D. Kentucky School of Medicine, Louisville, 1859; of St. Joseph, Mo.; a surgeon in the Federal service during the Civil War; fell on a slippery sidewalk in St. Joseph, January 18, and died a few minutes later, aged 72.

John Madison Munday (license, Ky., 26 years of practice, 1894); for more than forty years a practitioner of Mercer county, Ky.; died at his home in Pleasant Hill, near Harrodsburg, March 20, from carcinoma of the liver, aged 69.

Charles L. Buddenbohn, M.D. Washington University School of Medicine, Baltimore, 1873; coroner of the southwestern district of Baltimore county in 1898; died at his home in South Baltimore, April 7, from angina pectoris, aged 58.

Abijah D. Scruggs, M.D. Jefferson Medical College, Philadelphia, 1867; a member of the American Medical Association; a Confederate veteran; died at his home in Knoxville, Tenn., April 9, three weeks after a surgical operation, aged 66.

David A. Williams, M.D. Miami Medical College, Cincinnati, 1888; of Franklin, Ohio; a member of the American Medical Association; died suddenly from heart disease while watching a conflagration in that place, April 9, aged 49.

Hugh J. DeVer, M.D. University of Aberdeen, Scotland, 1875; for eight years surgeon in the British Navy; afterward a surgeon on transatlantic steamers; died at his home in Waterbury, Conn., April 9, from pneumonia, aged 56.

James Knight, M.D. Iowa Medical College, Keokuk, about 1860; license, Ont., 1869; a member of the Toronto Medical Association; died at the home of his son in Jerry, Wash., Dec. 26, 1908, from valvular heart disease, aged 75.

Harry Olin Lyford, M.D. Missouri Medical College, St. Louis, 1893; a member of the Oklahoma State Medical Association; president of the Sapulpa board of health; died at his home, March 25, from meningitis, aged 49.

Thomas William Carlaw, M.D. Trinity Medical College, Toronto, 1893; L.R.C.S. and L.R.C.P., Edinburgh, 1898; L.F.P. and S., Glasgow, 1898; died at his home in Campbellford, Ont., Nov. 5, 1908, aged 45.

Howard E. Mitchell, M.D. University of Maryland, Baltimore, 1882; of Ellerslie, Md.; died at the Western Maryland Hospital, Cumberland, April 6, forty-eight hours after having been struck by a train, aged 54.

Samuel Alonzo Hazen, M.D. New York University, New York City, 1878; for five years a member of the faculty of Columbia University; died at his home in Sharon, Pa., April 7, from nephritis, aged 65.

Oscar M. Barber, M.D. New York Homeopathic Medical College, New York City, 1871; for several years health officer of Stonington, Conn.; died at his home in Mystic, Conn., April 3, from gastritis, aged 71.

George A. Starkey, M.D. Louisville (Ky.) Medical College, 1884; of Waynesville, Ill.; a member of the Illinois State Medical Society; died in Eureka Springs, Ark., March 19, from leukemia, aged 51.

Andrew Bennett Gotham, M.D. Yale University, New Haven, 1879; a member of the Connecticut State Medical Society; died at his home in Wilton, March 30, from nephritis, aged 58.

John M. Pirtle, M.D. Kentucky School of Medicine, Louisville, 1852; a veteran of the Mexican War; died at his home in Los Angeles, Cal., March 28, aged 80.

David B. Milliken, M.D. New York University, New York City, 1854; a member of the American Medical Association; died at his home in Landisburg, Pa., Dec. 14, 1908, from angina pectoris, aged 75.

George Frederick Thomin, M.D. Medical College of Ohio, Cincinnati, 1869; formerly of Williamstown, Mo.; died at the home of his daughter in Butte, Mont., April 7, from cerebral hemorrhage, aged 61.

Oscar W. Slettengren, M.D. University of Upsala, Sweden, 1885; for several years surgeon on the Hamburg-American steamship line, died at his home in Boston, April 5, from pneumonia, aged 61.

James Knox Niven, M.D. McGill University, Montreal, 1901; M. C. P. & S., Manitoba; of Minnedosa, Man.; a veteran of the Boer War; died at the home of his father, in London, Ont., March 30, aged 30.

Thomas Theodore Hay, M.D. Medical College of the State of South Carolina, Charleston, 1845; died at his home in Raleigh, N. C., from uremia, following prostatic hypertrophy, March 4, aged 85.

George M. McKenney, M.D. Rush Medical College, Chicago, 1889; of Oregon, Ill.; a member of the American Medical Association; died in Amarillo, Texas, March 23, from ptomain poisoning, aged 44.

Milton Newberry, M.D. University of Pennsylvania, Philadelphia, 1855; for fifty-four years a practitioner of Montgomery county, Pa.; died at his home in Fort Washington, April 4, aged 79.

Homer Lawrence Mathews, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1874; for more than 60 years a practitioner; died at his home in Auburn, Neb., March 30, aged 85.

Bernard J. Downey, M.D. University of Michigan, Ann Arbor, 1895; for a time city physician of Ottawa, Ill.; died at the home of his parents in that city, April 7, aged 36.

Robert E. Barnes, M.D. University of Michigan, Ann Arbor, 1857; surgeon in the Army during the Civil War; died at his home in Galesburg, Ill., April 6, aged 78.

George Emit Martin, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1882; died at his home in Newkirk, Okla., March 22, from nephritis, aged 52.

Edward Pontney Irons, M.D. University of Maryland, Baltimore, 1855; assistant surgeon in the Army in 1865; died at his home in Baltimore, April 4, aged 84.

Isaac H. Lewis, M.D. Western Homeopathic College, Cleveland, 1857; one of the earliest settlers of David City, Neb.; died at his home April 3, aged 81.

Foster P. Utley, M.D. University of Vermont, Burlington, 1883; formerly of Syracuse, N. Y.; died at his home in Taberg, N. Y., April 6, aged 54.

Kelse Monjar Hoffman, M.D. Western Reserve University, Cleveland, 1870; died at his home in Clintonville, Pa., from anemia, February 21, aged 77.

Charles Lewis Seymour, M.D. Medical College of Ohio, Cincinnati, 1894; died at his home in Kingsville, Texas, February 15, from pneumonia, aged 43.

Frank Foster Crandell, M.D. Cleveland Homeopathic Medical College, 1903; died at his home in Turtle Creek, Pa., April 10, from pleurisy, aged 40.

Joseph B. Benson, M.D. McGill University, Montreal, 1875; first mayor of Chatham, N. B.; died at his home in that city, April 7, from pneumonia.

John H. Cramer, M.D. Missouri Medical College, St. Louis, 1861; formerly of Mandeville, Mo.; died at his home in Bogard, March 30, aged 72.

James Clinton Field, M.D. Louisville (Ky.) Medical College, 1882; of Americus, Ga.; died in the Macon (Ga.) Hospital, April 7, aged about 50.

Robert J. Harris, M.D. Louisville (Ky.) Medical College, 1890; postmaster of York, Ala.; died at his home April 3, aged about 45.

David M. Lines, M.D. Eclectic Medical Institute, Cincinnati, 1882; formerly of New Orleans; died in Tampico, Mexico, Dec. 7, 1908.

Brock Carter, M.D. École de Médecine et de Chirurgie, Montreal, 1846; died suddenly at his home in Montreal, April 5, aged 83.

Duncan A. Stewart, M.D. Trinity Medical College, Toronto, 1877; died at his home in Ailsa Craig, Ont., Dec. 1, 1908, aged 59.

Hosea Hudson (license, Neb., 1891); a pioneer physician of Nebraska; died at his home in Chappell, January 7, aged 81.

John A. Rogers, M.D. Cincinnati, 1843; died at his home in Kenton, Ohio, March 16, from senile debility, aged 89.

John W. Hulme (license, Tenn., 1889); died at his home in Santa Fe, Tenn., Dec. 1, 1908, from cystitis, aged 70.

Thomas W. Bedford, M.D. University of Louisville, Ky., 1861; died at his home in Chaplin, Ky., April 10.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Medical Legislation in Various States

The following items of interest regarding medical legislation have been reported since the publication of the last summary:

ARIZONA

The Arizona Medical Association is endeavoring to secure the passage of a bill making an appropriation for a bacteriologic and chemical laboratory in connection with the University of Arizona, for the purpose of making analyses of milk, water, foods, etc. Twelve hundred dollars is asked to maintain the laboratory.

ARKANSAS

S. B. 165, creating a separate board of medical examiners for physiomedical physicians, was defeated in the senate by a vote of seven to seventeen.

CALIFORNIA

The "naturopathic" bill, previously referred to, has been defeated.

COLORADO

A bill providing for a state board of osteopathy has passed the senate. A bill empowering the University of Colorado to conduct courses in medicine, pharmacy and chemistry at Denver as well as at Boulder, has passed both houses. H. B. 185, amending the medical practice act, has passed the house.

CONNECTICUT

Among the important bills before the general assembly is one providing for the establishment of a Connecticut Colony for Epileptics, authorizing the appointment of three commissioners to select and purchase a location and erect suitable buildings. The bill provides that the state is to pay $200 annually for each patient in the colony, while the expenses of traveling and clothing are to be paid by the towns from which they come. An antivaccination bill to make it unlawful for any board of health, board of education or other public boards to compel the vaccination of any infant or to make vaccination a condition for attendance on any public or private school in the city, and the usual optometry bill, are also before the legislature.

DELAWARE

The legislature has passed amendments to the present vital statistics act which will bring Delaware in line with the other states and probably secure its admission to the registration area.

ILLINOIS

No change has taken place in the legislative situation in this state.

IOWA

The county hospital bill has become a law. It provides that on petition of any 200 persons resident in a county the board of supervisors shall order a special election to decide whether the county shall issue bonds to build and maintain a county hospital and tuberculosis sanitarium. If the election results

in favor of a hospital, the supervisors are to appoint a board of seven hospital trustees and to issue bonds for the erection of the hospital. A bill to consolidate the state boards of pharmacy and health, the state food and dairy commission and examining boards in medicine, chemistry and veterinary surgery, the department of tuberculosis of the state board of control and the office of the state veterinarian surgeon and to put all the boards and offices under the control of a state board of health, has been prepared by the executive committee of the state society. The bill provides for a board of three members to be appointed by the governor who shall devote their entire time to the work of the commission and receive a salary of $5,000 each. This board is to have entire charge of all health matters in the state, including vital statistics, quarantine, dairy products, food and drugs, inspection of street cars, railway cars, hotels, restaurants, sewage systems, etc., as well as a bureau of publicity. The bill is said to have the endorsement and support of Governor Carroll. It is of interest, as representing the inevitable reaction from the multiple boards which have so markedly increased in past years.

MISSOURI

The vital statistics bill, patterned after the model bill on this subject drafted by and endorsed by the Committee on Medical Legislation of the American Medical Association, has passed both houses and become a law. This is probably the most important legislative advance made this year. The addition of Missouri, with the cities of St. Louis and Kansas City, to the registration area, is an enormous gain. The medical profession of the state and particularly those having charge of the legislative work, are to be congratulated on the success of their efforts.

NEBRASKA

H. B. 322, providing for the care of indigent consumptives, has become a law. It provides that any person afflicted with tuberculosis of the respiratory tract who is without means to pay for hospital treatment may be admitted to a suitable hospital on order of the Nebraska State Board of Health and given proper care and treatment at the expense of the state. Hospitals or sanitariums to which such patients are sent are required to use the most modern means of treatment. The expense of the care of such patients falls on the county in which the patient lives. On written application to the county judge on the part of the patient or some relative or friend the judge is to order a hearing and examine witnesses under oath. If the judge is satisfied that the application complies with the requirements of the law he must prove the application in writing and certify it to the county board, which must thereupon furnish transportation to some hospital in the state approved by the State Board of Health. This law involves a new principle, viz., that of a court declaring a citizen to be an invalid and entitled to public care. S. B. 18, creating a board of osteopathic examiners of five persons and H. B. 70, providing for the registration of trained nurses under the supervision of the State Board of Health, have become laws. The latter provides that examinations shall be held at least once a year which shall be limited to nurses of twenty-one years or over, with good moral character, who have received an education equivalent to that required for admission into high schools and who have graduated from a training-school, connected with a general hospital or sanitarium, requiring at least two years' training. Nurses graduating prior to Jan. 1, 1911, are permitted to register without examination. Only those registered by the board are to be known as registered nurses. Gratuitous nursing by friends or members of a family, of invalids, as well as nursing by persons who do not assume to be registered nurses is specifically exempt.

NEW YORK

The antivivisection bills introduced early in the session of the legislature have been killed, through the decision of the assembly committee on judiciary, which did not report either of the bills restricting animal experimentation. A bill providing for the appointment of not less than 10 or more than 60 physicians in each judicial district as medical expert witnesses to serve in any civil or criminal action in the district has been introduced into the assembly.

NORTH CAROLINA

An optometry bill, similar to the bills introduced in other states, has become a law.

PENNSYLVANIA

The discussion over the Herbst-Shreve bill, previously referred to, has occupied much attention as well as a large amount of space in the newspapers of the state, and has been discussed from all points of view. The bill was subject to so much amendment and manipulation that it is exceedingly difficult to say just what was the final status of its provisions. Unusual public interest was shown in the matter and the entire question of state regulation of the practice of medicine has been generally discussed. The bill was finally dropped from the calendar on April 14, on motion of Mr. Shreve, who introduced it. An osteopathic bill, providing for a separate board of examiners, has been signed by the governor.

WEST VIRGINIA

An osteopathic bill has been introduced, also a bill creating a state board of control and a state board of regents consisting of three members appointed by the governor, which board shall have entire charge of all state institutions, educational and charitable.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month—Fourth Weekly Meeting

PARALYTIC DEMENTIA

SYNONYMS.—Dementia paralytica; progressive general paralysis; general paresis; general paralysis of the insane.

ETIOLOGY.—Age, sex, mental strain, alcoholism, heredity. Syphilis.

SYMPTOMS.—(a) Prodromal stage: Insidious onset, sleeplessness, tremors, irritability, depression, dull headache, general pains, malaise, digestive disorders. Mental symptoms: Loss of memory, errors in speech or writing, misuse of words, indifference of proprieties and higher sentiments; becomes extravagant, indulges in excesses. Physical symptoms: Facial paralysis, ocular palsies, Argyll-Robertson pupil, changes in reflexes, muscular tremors, difficulties in articulation, slight syncope, epileptiform seizures, gastric and visceral crises, tactile and pain sensibilities diminished. Course and duration of prodromal stage. (b) Established disorder: Mental symptoms: Failure of memory, diminished number of ideas, weakened judgment, lack of orientation, delusions (exalted or depressed), hallucinations and illusions, emotional irritability, loss of ethical and esthetic feeling. Physical symptoms: Peculiar articulation and writing (poetic), tremor, pupillary irregularities, changed reflexes, muscular weakness, apoplectiform and epileptiform crises, emaciation, trophic disorders. Occurrence of remissions, duration. (c) Terminal period: Progressive changes in mind and body.

PATHOLOGY.—Changes in meninges, fluid, cortex, ependyma, ganglion cells, nerve fibers, blood vessels.

PARANOIA

ETIOLOGY.—Heredity, infantile cerebral disorders, physical and mental degenerative stigmata.

SYMPTOMS.—(a) Prodromal period, "Period of subjective analysis"; morbid tendencies, eccentricities, paresthesias of entire body, tinnitus, etc., lead to introspection and hypochondriac tendencies. Seeks explanation of sensations in himself, then in environment, becomes suspicious, distrustful, develops illusions and hallucinations, particularly auditory. (b) Persecutory period, "Period of delu-

sive explication"; delusions of persecution by unknown enemies, "they" attempt to destroy him; later believes some secret or religious order responsible; auditory hallucinations increase, delusions lead to homicidal attempts. (c) Expansive period, "Period of transformation of personality"; delusions of grandeur, result of his attempt to explain cause of persecution, may be religious, political, erotic, etc. Character of delusions lead to paranoia religiosa, p. inventoria, p. reformatoria, p. erotica, p. querulans, etc. Mental condition of paranoiac aside from delusions. Course and duration of each stage.

IDIOCY

DEFINITION.—Idiocy, imbecility and feeble-mindedness.

CLASSIFICATION (CLINICO-PATHOLOGIC).—Hydrocephalic, microcephalic, paralytic, epileptic, traumatic, sensorial, meningitic, myxedematous (cretinism), amaurotic, idiots savants.

ETIOLOGY.—(a) Degenerative Causes: Heredity (nervous and mental diseases in parents); pathologic heredity (tuberculosis, alcoholism, syphilis, etc., in parents), consanguinity, etc. (b) Adventitious Causes: (1) Gestational (maternal or fetal); (2) parturitional (difficult labor, instrumental deliveries, prematurity, etc.); (3) postnatal (trauma, cerebral diseases, febrile diseases, etc.).

DIAGNOSIS.—Physical condition, shape and size of head, cranial malformations and asymmetry. Anatomical stigmata, paralysis of limbs, morbid movements, nystagmus, atheosis, etc. Imperfect sensations, perceptions, sensory organs, Diagnosis of form and cause. Diagnosis of degree.

MONTHLY MEETING

Insanity in This State: (a) as Affecting Responsibility for Crime; (b) as Affecting Civil Rights.

Medical Treatment of the Insane.

Prognosis in the Different Forms of Insanity.

Medicolegal

No Defense Under Law that Deficient Milk Was as Given by Cow

The Second Appellate Division of the Supreme Court of New York holds, in People vs. Bosch, that under a law which provides that the term "adulterated milk" shall mean milk containing more than 88 per cent. of water or fluids, or less than 12 per cent. of milk solids, it was no defense to a prosecution for selling adulterated milk that the milk, as given by the cow, contained too much water.

To similar effect is the decision of the Supreme Court of California in the Hoffman case. Here the city of Los Angeles passed an ordinance establishing the standard of milk at 87.5 per cent. water, by weight, and 12.5 per cent. milk solids, of which latter at least 3.5 per cent. should be butter fat. It was charged that the ordinance was unreasonable and in restraint of trade in exacting too high a standard for the milk permitted to be sold, it being averred "that milk may come direct and pure in its natural state from the cow, and especially from Holstein cows, and yet be below the standard fixed by the city ordinance."

Now it may be, the Supreme Court of California says, that a municipality may pass an ordinance imposing a standard for milk which would be unreasonable, oppressive, in restraint of trade, and therefore void. It may even be, for aught this court can judicially know, that this ordinance is of that character. But the mere averment that milk below standard might come from one or another cow is not sufficient to tender an issue of this character.

Nor is it any objection to the validity of the ordinance that its regulatory provisions and the penalty for its violation differ from those of the state law. If prosecution is had under the state law, a defendant is entitled to the protection which the state law affords him; if under the ordinance, then his rights and duties are governed by that enactment.

Liability Under State Pure Food Law for Damages for Sickness of Consumer

The Supreme Court of Minnesota says, in the case of Meshbesher vs. Channellene Oil & Manufacturing Co., that the defendant sold to a retail grocer a quantity of oil, knowing that the same would be sold at retail to his customers for use in cooking their food. The plaintiff purchased of the grocer a quart of the oil for such purpose which consisted of about 40 per cent. of mineral oil and 60 per cent. of cotton seed oil. It was injurious to health. His food which he ate, was cooked in the oil, and he was thereby made seriously ill. This action was then brought to recover damages for the injuries so sustained. A judgment was rendered for the plaintiff, which is here affirmed.

It may be conceded, for the purpose of this appeal only, that, except for the state pure food laws, or similar statutory provisions, the allegations of the complaint in this case would not state a cause of action against the defendant; but, read in connection with the statute, the court holds that they stated a cause of action, for they showed a neglect to discharge the duty imposed by the state pure food statute and a violation of its prohibitions by the defendant. It was not necessary to plead the statute, as it is a public act. The statute prohibits and punishes as a misdemeanor the manufacture, sale, or offering for sale of any article as food, if it in itself is injurious, or if it contains any ingredient injurious to health. This statute is intended to protect the health of all of the people of the state. Clearly the plaintiff belonged to the class for whose benefit the statute was intended, and this case came within the rule that where a statute for the protection or benefit of individuals prohibits a person from doing an act, or imposes a duty on him, if he disobeys the prohibition or neglects to perform the duty, he is liable to those for whose protection the statute was enacted for damages resulting proximately from such disobedience or neglect. Negligence is implied from a violation of the statute, and the plaintiff's injuries resulted proximately from the defendant's failure to comply with the statute, for it sold the oil to the grocer, knowing that it was to be sold by him to his customers for food purposes.

The fact that the trial court did not find that the defendant knew that the oil was impure did not affect the question of its liability; for it was bound to know whether the article, which it sold to be retailed to the customers of the purchaser for food purposes, was sound, wholesome, and complied with the statute. This is a salutary and necessary construction of this pure food statute, which in this respect is analogous to statutes prohibiting the sale of liquor to minors, in construing which courts uniformly hold that an honest belief that the minor was 21 years of age is no defense.

Power of Health Officers and Liability of Counties in Contagious Disease Emergencies

The Supreme Court of Kansas holds, in the case of Hawthorne vs. Board of County Commissioners of Cherokee County, that a health officer appointed by a local board of health, having knowledge of any infectious or contagious disease, is required to immediately exercise and maintain supervision of such case, seeing that it is properly cared for and isolated. The performance of these duties involves expense, and the power to care for such diseased persons implies the authority to contract for medical attendance and nursing in an emergency which requires immediate action.

The county board has authority to examine and settle all accounts chargeable against the county, and to determine whether services which it is claimed were rendered by the order of the health officer were properly performed under his direction, and their reasonable value. It has the general control of the situation and of the expenditures, but in the circumstances disclosed in this case (where it was alleged that the existence of smallpox created an emergency requiring immediate action before a meeting of the board could be held) a previous employment by order of the board itself was not a condition precedent to the liability of the county.

The court says that the provisions of the Kansas statutes designed to enforce the quarantine and to prevent the spread

of contagion evince the legislative purpose to protect the health of the people through the prompt and vigorous action of the officers intrusted with these important duties. County commissioners are elected from the several districts of their counties, and some time is usually necessary in order to call and hold a meeting. If it should be held that formal action of the board is necessary in order to establish a quarantine, obtain medical attention, and perform the like duties required by the law in each particular case, the law might, and probably would, prove inadequate to secure the end manifestly intended. The law therefore devolves these administrative duties on the health officer, requiring him to immediately exercise and maintain a supervision over such case or cases, seeing that all such cases are properly cared for and isolated.

If it should be held that the financial inability of the persons under treatment is a condition precedent to the liability of the county for their care, it should also be held that the fact that the proper officer has made an examination and taken the action raises a presumption at least that they were so unable, for public officers are presumed to have properly performed their duties. Suppose, however, a person able to pay should refuse to take the precautions, and observe the requirements of the law, although ordered by proper authority; is the health officer powerless to provide for the quarantine and the care necessary to prevent the spread of contagion? It might be that the persons benefited would be liable to refund to the county or city, as the case might be, the amount so expended. The court does not decide this matter now, for such a case was not presented in this record.

It was said that the court must presume that the county had a poor farm and that in such case relief could not be given elsewhere. The court can not presume however that the county had the necessary conveniences at such farm to isolate smallpox patients. On the other hand it must presume that the county had not or that it was impracticable to use them in the emergency because of the fact that the proper officer provided for quarantine and attendance elsewhere.

The defendant board of county commissioners relied on the opinion in Smith vs. County of Shawnee, 21 Kan., 669, wherein it was held that a county maintaining a poor house was not liable for such services, but that decision was made before the statutes hereinbefore referred to were enacted, and even then it was said in the opinion "that an enlightened liberality, as well as a cautious prudence, would justify the commissioners in making a reasonable appropriation for the services"; the services in that case having been rendered by a physician for a smallpox patient on the request of the township trustee.

As the services in the present case were rendered to a family residing in a township and not in a city, the county board of health had jurisdiction, and the plaintiff's services as nurse were properly chargeable against the county.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

April 10

1 *The Cammidge Reaction in Diseases of the Pancreas. F. P. Kinnicutt, New York.
2 *Rational Treatment of Tabes Dorsalis in Relation to Its Pathogenesis. T. A. Williams, Washington, D. C.
3 The Three Ureteral Isthmuses. B. Robinson, Chicago.
4 Proper Teaching of Therapeutics in Medical Schools. G. F. Butler, Chicago.
5 Diagnosis and Treatment of Diabetes Mellitus. J. D. Dunham, Columbus, Ohio.
6 *History of Tuberculosis. G. F. Laidlaw, New York.

1. **The Cammidge Reaction.**—During the past fifteen months Cammidge's pancreatic test has been applied in all cases of suspected pancreatic disease, of cholelithiasis, cholecystitis and diabetes admitted to Kinnicutt's wards in the Presbyterian Hospital. Out of 51 cases 13 gave positive reactions, 38 negative reactions. He summarizes the cases, briefly reviews the literature, and concludes that a review of the studies, to the present date, of the urine, both in clinical and experimental pancreatic disease, indicates that, while the pancreatic reaction is not pathognomonic, it is strongly suggestive, of inflammatory and destructive lesions of the pancreas, and is of much assistance in diagnosis in association with other clinical evidence of disease of this organ.

2. **Tabes Dorsalis.**—Williams points out that empirical treatment may succeed in curing disease when the factors are quite simple, and points to quinin in malaria, mercury in secondary syphilis and outdoor life in a good climate in tuberculosis as examples. But patients have been made quite uncomfortable by quinin, while mercury and open-air treatment have failed, respectively, in syphilis and tuberculosis. We now know that these drawbacks and failures were due to lack of understanding of the precise relationship of the remedy to the cause of the disorder. To a similar lack of knowledge must be attributed many failures in the treatment of tabes dorsalis by mercury. Now that the syphilitic origin of tabes has been put beyond doubt, many are inquiring why mercury failed in the past and whether it can not succeed in the future. Williams reviews the pathogenesis of tabes, and concludes that it is to other causes than the nature of the noxa that we must ascribe the failure until now of specific therapy. These causes he believes to be threefold: (1) Faulty methods of administration; (2) hasty generalization; (3) overexpectation. It is only by inserting mercury directly into the body in known quantities that we can commensurately antidote the noxa of syphilis with the minimum of injury to the patient's tissues. It is only by this method that it is fair to judge the specific therapy of tabes and paresis, and recent results have justified hopefulness, for numerous cures are being reported. This does not, of course, mean a restoration of degenerated tissues. The moral is the imperative need of early diagnosis of the sometimes fleeting and obscure neuralgia, vertigo, urinary and gastric difficulties, etc., which so often precede locomotor symptoms of tabes dorsalis. A careful neurologic diagnosis, sometimes including examination of cerebrospinal fluid, would enable us to anticipate many a locomotor ataxia. The Wassermann reaction will enable us to dispense with much neurodiagnostic lore and skill; but the installation for this is very complicated, and therefore not available except in certain large centers; and in any case a certain knowledge of neurologic signs is required before one can even suspect incipient tabes or paresis.

6. **Tuberculosis.**—Laidlaw reviews the history of tuberculosis, and shows that the trend is toward a vitalistic attitude to the use of remedies, which, instead of attempting to do things themselves, stimulate the body tissues to protect themselves by setting the body's own protective apparatus in motion.

New York Medical Journal

April 10

7 The County Medical Society. J. R. Goffe, New York.
8 *Economic Housing of Consumptives, with Special Reference to the Southwest. P. M. Carrington, Fort Stanton, N. M.
9 *Schema for Classification of Patients on Examination. L. D. Fricks, Fort Stanton, N. M.
10 Flatfoot. F. E. Peckham, Providence, R. I.
11 *Intra-Abdominal Injection of Oxygen as Studied in Animals. H. D. Meeker, New York.
12 *Chronic Dilatation and Prolapse of the Stomach. A. E. Benjamin, Minneapolis.
13 Neuroretinitis Due to Typhoid. J. V. Clothier, Philadelphia.
14 Paralytic Conditions of Childhood. C. Rosenheck, New York.

8. **Economic Housing of Consumptives.**—Carrington points out that the large number of health seekers suffering from tuberculosis who are crowding into the arid climate of the southwest, and particularly into New Mexico and Arizona, is making a great problem in their being cared for. A large proportion of them are indigent, and the burden falls very heavily on the public charges of small towns that are called on to support them. Moreover, the initial difficulty of impressing on the people the communicability of tuberculosis has, not unnaturally, led to a very decided phthisiophobia as a reaction. Carrington, as one who himself sought and gained health in the southwest, has a great sympathy for those poor victims of tuberculosis who come to the southwest

with barely sufficient funds to reach their destination, in the hope of finding light employment which will maintain them until the climate shall effect a cure. He suggests the solution of the problem by means of the tent house, as developed at Fort Stanton Sanatorium, and now being more extensively used in the southwest. He points out to physicians the necessity of being slow in advising such patients as have not means to pay their own expenses, from coming to the southwest until private and public charity shall have had time to provide sanatoria.

9. **Classification of Tuberculous Patients.**—Fricks discusses the various classifications of tuberculosis that have been suggested, including that adopted by the National Association for the Study and Prevention of Tuberculosis, and suggests the following classification:

Incipient:
1. Infiltration limited to one or both apices or a small part of one lobe.
(x) a. With slight constitutional symptoms, such as malaise, variations of temperature or acceleration of pulse.
b. Without marked constitutional symptoms, such as gastric and intestinal disturbances, high fever—101.3 F.—or rapid loss in weight.
c. Without tuberculous complications.
d. Without noticeable impairment of function.
e. With or without expectoration or tubercle bacilli.
Moderately advanced:
2. Infiltration involving more than the apices or a small part of one lobe up to two lobes.
3. Consolidation limited to one or both apices or to a small part of one lobe with or without infiltration up to two half lobes.
4. Disseminated fibroid deposits with evidence of active process.
f. Without cavity formation.
(x) g. With marked constitutional symptoms.
h. Without serious tuberculous complications.
i. Without marked impairment of function.
Far advanced:
5. Consolidation or infiltration involving more than 2 or 3.
6. Extensive fibroid process with evidence of active process.
j. With or without cavity formation.
(x) k. With marked constitutional symptom.
l. With or without serious tuberculous complication.
m. With or without marked impairment of function.

He discusses in detail those items marked (x). His suggestion is based on two years' examination and report of tuberculous patients on their arrival at the U. S. Marine-Hospital Sanatorium, Ft. Stanton, and a running discussion of the national association's classification by the different medical officers who have been stationed at the sanatorium.

11. **Intra-abdominal Injection of Oxygen.**—Meeker reports a case of tuberculous peritonitis in which Dr. W. S. Bainbridge injected oxygen into the abdomen with beneficial results. He records a series of experiments on animals undertaken to determine the value of the procedure and establish it on a scientific basis. He says that a study of experiments on the intra-abdominal introduction of oxygen in animals permits of the following conclusions:

1. Oxygen is completely absorbed from within the abdominal cavity.
2. Oxygen is a slight respiratory stimulant.
3. Oxygen is a slight cardiac stimulant.
4. Oxygen has but little effect on blood pressure when the pressure of the gas is moderate.
5. Oxygen tends to bring an animal out quickly from deep anesthesia.
6. Oxygen hastens the recovery of an animal after discontinuance of anesthetic.
7. A pressure of more than 1,800 mm. of water may cause collapse.
8. Oxygen tends to prevent the formation of adhesions. It does so more effectively than any inert gas.
9. Oxygen quickly changes a dark blood to scarlet in cases of anoxemia.
10. Oxygen stimulates intestinal peristalsis.
11. Oxygen is not an irritant to the peritoneum or abdominal viscera.

He describes the technic of administration in the human subject, reports five cases in which it was used, and cautions against the tendency to collapse after the oxygen has been absorbed. He holds that the animal experiments and the results witnessed in the human subject justify the intra-abdominal use of oxygen in surgical therapy.

12. Abstracted in THE JOURNAL, Jan. 16, 1909, p. 236.

Lancet-Clinic, Cincinnati

April 10

15 The Wassermann Diagnostic Test for Syphilis. M. L. Heidingsfeld, Cincinnati.
16 The Fly—An Etiologic Factor in Intestinal Disease. A. E. Osmond, Cincinnati.
17 The Child—What of Its Future? W. E. McKinley, St. Joseph, Mo.

Journal Arkansas Medical Society, Little Rock

February

18 Sarcoma of the Kidney. C. E. Bentley, Little Rock.
19 Rare Cases in Obstetrics. H. C. Dunavant, Osceola.
20 *The Management of Abnormal Labor. C. K. Caruthers, Pine Bluff.
21 Unreliability of Murmurs. N. S. Word, Camden.

20. Abstracted in THE JOURNAL, July 18, 1908, p. 249.

Journal of Biological Chemistry, Baltimore

March

22 *Spontaneous Oxidation of the Sugars. A. P. Mathews, Chicago.
23 Spontaneous Oxidation of Cystein. A. P. Mathews and S. Walker, Chicago.
24 Action of Cyanids and Nitrites on the Spontaneous Oxidation of Cystein. A. P. Mathews and S. Walker, Chicago.
25 Soil Fatigue Caused by Organic Compounds. O. Schreiner and M. X. Sullivan, Washington, D. C.
26 The Preparation of Glyoxylic Acid as a Reagent. S. R. Benedict, New Haven, Conn.
27 Critical Hydroxylion Concentrations in Diastatic Hydrolysis. C. Quinan, San Francisco, Cal.
28 *Studies on Enzymes: II. The Diastatic Enzyme of Paramecium in Relation to the Killing Concentration of Copper Sulphate. A. W. Peters and O. Burres, Champaign, Ill.
29 *Bleaching of Flour. E. T. Ladd and H. P. Bassett.

22. **Spontaneous Oxidation of the Sugars.**—Mathews tries to answer the question: Why do sugars oxidize more readily in the tissues than outside the body? Levulose oxidizes rapidly in alkaline solution and the other sugars oxidize at about the same speed in alkaline solution and about one-fourth as fast as levulose. The oxidation for sugars, except levulose, is most rapid in a solution of the concentration of about 2 N. sodium hydroxid. Stronger alkali reduces the rate of oxidation. These experiments show that the main reason for the slow oxidation of glucose in the air is, not lack of active oxygen, but the fact that the molecule of sugar is not activated. The activation is brought about by a preliminary ionization in an alkaline solution. It is possible that a similar process may take place in living matter, some substance being present which unites with the glucose molecule and brings about its dissociation. This substance may be a specific agent responsible not only for the oxidations, but for all the other more important metabolic activities of protoplasm. For such substances Mathews suggests the term metabolases, since they hasten metabolism. Under the term oxidases there have hitherto been confused two classes of substances; one which activates the oxygen, such as iron; the other, the more important class, which activates by dissociation of the reducing substances. The latter are specific, the former are not.

28. **Studies on Enzymes.**—Peters and Burres have studied the action of copper sulphate on paramecium and find that in the very low concentration of one part of hydrated copper sulphate to 20,000 parts of water the salt inhibits the action of diastase and quickly kills the animals. They suggest that inasmuch as the concentration necessary to check enzymic action is sufficient to kill the animal, it is probable that mineral poisons which kill in minute doses act by inhibiting the action of enzymes essential to life.

29. **Bleaching of Flour.**—Flour is bleached commercially by the action of the fumes of nitrous acid or nitrogen peroxid. Ladd and Bassett have shown that nitrites or nitrates or nitrite-reacting or nitrate-reacting material are among the products formed in the flour, and that bread baked by the domestic method will contain from one-third to one-half the nitrite-reacting material found in the flour. The proportion of nitrates in the bread increases as the nitrites decrease, the proportion depending on the method of baking. The bleaching agent acts both on the fat and on the gluten of the flour. The gluten of the flour is less digestible than that of unbleached flour and the baked gluten or bread made from bleached flour shows a similar but smaller difference in digestibility. The experiments show that the process of bleaching is essentially different from the natural ageing of the flour.

New York State Journal of Medicine, New York

March

30 *The Modern Hippocrates. A. Jacobi, New York City.
31 Mineral Waters of Saratoga. D. C. Moriarta, Saratoga Springs.
32 *Improvements in the Technic of the Extraction of Cataract. L. Howe, Buffalo, N. Y.

33 *The First Interview with the Patient. W. S. Ely, Rochester.
34 *Intramuscular Injections in the Treatment of Syphilis. V. C. Pedersen, New York.
35 Senile Changes in the Prostate. N. Jacobson, Syracuse.
36 *Problems Relating to Prostatectomy. L. B. Bangs, New York.
37 Clinical Aspect of the Enlarged Prostate, with a Review of 67 Cases. J. N. Vanderveer, Albany.

30. **The Modern Hippocrates.**—After discussing the pathology, anatomy and physiology of Hippocrates, Jacobi deals with his prognostics. That he realized the great importance of prognosis is shown by the following sentence from his works: "It seems to me best for the physician to acquire practice in the production of the termination of a disease, for when he knows before and predicts the present state of his patient, and the past, and the future, also such things as the patient omits in his report on his condition, people will have firm confidence in him and in his superior knowledge and will entrust themselves to him." Jacobi describes the range of the Hippocratic prognosis and points out that the science and knowledge of prognosis differ for the modern clinician from the Hippocratic in the same degree as his nosology. Jacobi gives numerous instances in illustration of this point. He insists on the fact that there is both for prognosis and salvation no end of legitimate hope, "the best stimulant of the nervous and circulatory system." Sixty years ago an American was held up to ridicule for his report on the incision of an accessible brain abscess; to-day the apparently inaccessible large or small tumor or abscess is diagnosticated and removed and the doomed patient is cured.

He caustically discusses the running to seed of modern specialism, and points out that the exaggeration of specialistic tendencies is more extensive among the public than among medical men.

He sums up the modern Hippocrates as follows: "Our modern Hippocrates objects both to the therapeutic pessimism of the uninformed, or the mere naturalist, and to the optimism of the dilettanti who, mostly in the pay of the manufacturers, eulogize the latest synthetic chemical, which benefits the writer and his employer, if not the sick. He is also aware that pharmacology and the clinic have got too far apart from each other."

Of the ideal teacher he says that "he knows how to distinguish functional weaknesses from genuine disease, and recognizes the fact that the latter has stages with adaptable therapeutic indications; that a scientific diagnosis can be made on hills and in hamlets, but not without previous clinical and laboratory teaching, and that for city and country we should know enough and be diligent enough, to do most of our tests ourselves, and not to rely exclusively on the knowledge or honesty of laboratories; that a close study of a moderate number of ordinary cases is best for the instruction of the doctor embryo and not the hustling through wards filled with practically inaccessible material; that the same disease is not the same disease in different seasons, climes, constitutions and ages; that with every advancing decade there are increasing complications of lesions and symptoms, and of diagnosis, simple in the infant or child, which become more difficult from year to year and whose prognosis is more problematical—indeed I do not know whether all our rising pediatric specialists have an idea of how difficult a task it is to become a real all-around doctor. The modern Hippocrates keeps his hands clean like Billroth, and cleaner than the ballroom dandy, and teaches how to do much with very little."

32. Abstracted in THE JOURNAL, Feb. 6, 1909, p. 496.

33. Abstracted in THE JOURNAL, Feb. 20, 1909, p. 657.

34. Abstracted in THE JOURNAL, Feb. 13, 1909, p. 580.

36. Abstracted in THE JOURNAL, Feb. 20, 1909, p. 657, and published also in *American Journal of Urology*, March, 1909.

Therapeutic Gazette, Detroit

March

38 Purulent Diseases of the Middle Ear—The Treatment of Meningeal, Sinus, and Labyrinthine Complications. S. M. Smith, Philadelphia.
39 *Untoward Results from Diphtheria Antitoxin, with Special Reference to Its Relation to Asthma. H. F. Gillette, Cuba, N. Y.
40 Treatment of Acute Gonorrhea in the Male. H. M. Christian, Philadelphia.
41 *Treatment of Convulsions in Infancy and Childhood. J. H. McKee, Philadelphia.

39. Abstracted in THE JOURNAL, Feb. 13, 1909, p. 580.

41. **Convulsions in Infancy and Childhood.**—McKee enumerates as follows the causes of convulsions in a "chronologic order": (1) Neurotic inheritance; (2) intrauterine affections of the brain or circulatory apparatus; (3) causes operative at birth; (4) causes that operate soon after birth; (5) the most common causes of eclampsia in infancy is rickets; (6) the diarrheal diseases (principally infectious) of the first and second years; (7) meningitis; (8) brain tumors; (9) hydrocephalus; (10) polioencephalitis; (11) poliomyelitis; (12) the infectious diseases of severe type; (13) nephritis; (14) severe hemorrhage; (15) mineral poisons such as lead; (16) alkaloidal and other drugs; (17) embolism and thrombosis; (18) epilepsy. For practical purposes, when we exclude organic affections of the brain, heart, lung or kidney, the underlying state in infantile eclampsia is usually rickets, or nervous heredity. McKee discusses preventive treatment; the instruction of the mother concerning her physical and psychical life during pregnancy, and her protection from emotional storm and mental shock; preventive possibilities of good obstetric knowledge and skill; attention to the hygiene of the baby, with its intelligent medical supervision. Most convulsions should be viewed as wholly preventable occurrences for which parents, caretakers or lack of medical foresight are to blame. McKee knows no more uniformly dependable agent, in treatment of attacks, than chloroform. It is good practice, while the patient is anesthetized, to wash out the bowel with warm normal saline solution, permitting several ounces of the fluid to be retained. In a recent case the injection of a second quart of saline solution in a 17 months' old baby brought forth to McKee's astonished gaze, 8 inches of sewing silk, 82 inches of darning cotton, and hair from the tail of a rocking horse. Washing out the stomach is safer than emetics. These measures should be supplemented with a large dose or broken doses of calomel, followed with a single dose of castor oil or spiced syrup of rhubarb. Bromid and chloral he recommends to prevent recurrences, the latter drug by the rectal route, with sufficient starch to render it unirritating. Other measures mentioned are the coal-tar products, hydrotherapeutic agents, stimulants, bloodletting, oxygen, artificial respiration and massage of the heart, lumbar puncture, and puncture of the lateral ventricle.

Journal of the Missouri State Medical Association, St. Louis

March

42 Endocarditis. J. S. Triplett, Harrisonville.
43 Excision of the Lachrymal Sac as a Radical Cure for Chronic Inflammatory Processes Thereof. L. Williamson, St. Louis.
44 Fissure in Ano. W. H. Coffey, Kansas City.
45 *The Prostate as a Factor in Nervous Disease. J. L. Boehm, St. Louis.
46 The Preparatory and After-Treatment of Surgical Cases. J. N. Barger, Albany.
47 Case of Gumma of External Nose. J. S. Wever, Kansas City.
48 *What Major Operations Should be Attempted in Private Houses. O. Putman, Marceline.
49 The Doctor in Politics; or His Civic Responsibilities. E. G. Beers, Springfield.
50 Optometry, or Practice of Medicine Made Easy. L. Williamson, St. Louis.

45. **The Prostate and Nervous Disease.**—Boehm says that the prostate and its appendages when diseased have a special influence on the nervous system, and are to the neurotic male what the uterus and tubes are to the female and must always be carefully examined in neuroses. Apparently simple disturbances of the prostate may cause serious reflex neurotic conditions because of the complexity of the nervous mechanism surrounding and supplying it. The question of an internal physiologic section and the possibility of the lecithin and organic constituents of prostatic secretion serving as a nutritive factor to nerve metabolism, has not as yet been scientifically determined. Spinal asthenia and cerebral exhaustion are very common, often ascribed to overwork at the office or in literary pursuits, but not always recognized as dependent on a diseased prostate. In cases of sexual crimes and criminal perversion, an intrapelvic and extrapelvic examination of the genitalia of the accused should be made by expert neurologists

at the same time that the expert neurologists examine the mentality. Jurists should recognize the mental condition of the fiend or pervert, who commits sexual crimes as not always due to a hereditary taint, but as commonly the result of some previous urethral disease, uncured at the time. From this chronic diseased condition sexual mania results. There is a medical aspect to the recent lynching and riots because the fiends responsible are diseased and not human monstrosities. Temporary sexual insanity is a reality as much as a deranged mentality caused by typhoid fever or some condition of hyperpyrexia.

48. **Operation in Private Houses.**—Putman divides the major operations that can be attempted in private houses into two classes: First, the emergency cases that are the result of direct violence, i. e., high amputations, trephining, gunshot wounds, etc. There is another class of emergency cases that are not the result of direct violence, but call for quick judgment, and, more often, immediate operation. This class contains the greatest number of major operations that physicians are called on to do in private houses. Among these are: (1) Obstruction of bowels; (2) operation for appendicitis during attack; (3) operation for mastoid disease; (4) Cesarean section; (5) ectopic pregnancy; (6) strangulated hernia; (7) tracheotomy. He discusses these as follows:

1. There is little to say concerning ileus, but if the classical symptoms of obstruction are present and repeated high injections of water with the patient in the knee-chest position, fail to move the bowels, then the operation should be attempted at once. The high mortality rate following this operation is often due to postponing it until the patient is too weak and the adhesions are too firm to be broken.

2. In the operation for appendicitis during the attack, we should be guided by the severity of the attack, taking into consideration the number of preceding attacks. If it is the first or second attack and the symptoms point toward rupture of the appendix the operation should be done and it will be easier than when the rupture occurs in a case where there have been several attacks before. There will not be so many adhesions and they are not likely to be so firm. On the other hand, if the appendix ruptures, after a number of previous attacks, the operation could be more safely postponed. The adhesions would have walled off the pus from the abdominal cavity.

3. Mastoid disease often calls for prompt interference. It is a life saving operation and does not demand the strict aseptic surroundings of other major operations. It is merely opening an abscess and can be done just as well in a barn as in a hospital, for after reaching the pus, the field of operation will necessarily become infected.

4 and 5. Without raising the question of when cesarean section or operation for ectopic pregnancy is demanded, I will only state that both operations can be safely carried out in private houses and are probably done there more often than in the hospital.

6. Strangulated hernia demands an early operation to be successful and no time should be consumed in transporting the patient to a distant hospital. The patient should be prepared for operation at once, after reduction under chloroform has been tried.

7. Tracheotomy is the last-named of the emergency operations that should be classed as a major operation. When indicated, it should be carried out as quickly as the consent of the parents can be gained.

American Medicine, New York

March

51 An Appeal for the Sake of Man and of Medicine. G. M. Gould, Ithaca, N. Y.
52 Leprosy in Norway. H. L. Shively, New York.
53 Grippe—Its Etiology and Methods of Transmission. W. C. Schoenijahn, Brooklyn, N. Y.
54 Critique of So-Called Modified Radical Mastoid Operations. S. J. Kopetsky, New York.
55 Electricity in Treatment of Exophthalmic Goiter. A. R. Rainear, Philadelphia.
56 Prognosis and Treatment of Laryngeal and Pulmonary Tuberculosis. D. Robinson, New York.
57 Von Pirquet and Moro Tests in the Diagnosis of Tuberculosis. F. L. Christian, Elmira, N. Y.
58 Principles and Technic of Serodiagnosis of Syphilis. G. H. Fox, New York.
59 Congenital Pyloric Obstruction. M. O. Magid, New York.
60 Primary Tuberculosis of the Conjunctiva. E. Torok, New York.

Journal of Nervous and Mental Disease, Lancaster, Pa.

March

61 *Study of the Axis Cylinders in Five Cases of Glioma Cerebri. C. M. Byrnes, Charlottesville, Va.
62 Blastomycotic Lesions of the Brain. E. R. Le Count, Chicago.
63 Decompression for Cerebral Thrombosis. J. J. Thomas and F. B. Lund, Boston.

61. **The Axis Cylinders in Glioma Cerebri.**—Byrnes says that it is not infrequently observable in a variety of neuropathologic conditions—multiple sclerosis, tuberculoma, areas of compression and especially glioma—that the necropsy reveals a much more extensive process than could have been even suspected from a most thorough clinical examination. It is known that gliomata may exist for months, or even years, without causing either general or localizing symptoms of brain tumor. He asks: How are we to explain this persistence of function and absence of degenerative changes where the cerebral tissue is extensively involved? And, how are we to account for the apparently rapid cases which show a pathologic state similar to those existing for months or even years? After reviewing the theories that have been offered in explanation of these facts, he reports a study of five specimens of glioma, to show that in simple cerebral gliomata persistence of function and absence of degenerative changes in the spinal cord may be explained on a definite histologic basis. The summary of this study and the conclusions drawn are as follows:

1. In three of his five cases nerve fibers were found in the substance of gliomatous tissue by both Weigert and Bielschowsky methods.

2. Two of the cases showed an entire absence of fibers, or even myelin droplets by the Weigert method, while unmistakable axis cylinders could be seen in the silver preparation made from the same blocks of tissue. This is due, no doubt, to the greater vulnerability of the myelin sheath and its early disappearance. Thus there is certainly not a very intimate relationship between this sheath and the axis cylinders, and Brodmann maintains that there is no relation between myelinization and the formation of fibrils. Consequently, in such cases studied by the Weigert method alone, the absence of fibers in the tumor and the failure to find degenerations in the spinal cord led to the most obvious conclusion, that the fibers had been pushed aside.

3. In all five cases a great many more nerve fibers (axis cylinders) were found by the silver method than in the Weigert preparation.

4. In the fifth case, the entire pons was involved, and there was no evidence of the pyramidal fasciculi on gross examination, yet a section from the tumor substance, treated by the Bielschowsky method, showed an enormous number of normal axis cylinders; the anterior pyramids showed no degeneration in either longitudinal or transverse sections; and the Betz cells in the greater part were quite normal. Considering, then, the location of this tumor, its long duration, the absence of marked symptoms pointing to upper segment involvement, and the microscopic findings, it seems reasonable to conclude not only that nerve fibers are retained in gliomatous tissue, but that a large number persist as uninterrupted axones, passing through the tumor substance.

Western Medical Review, Omaha

March

64 *The Lower Femoral Epiphysis. B. F. Lorance, Auburn, Neb.
65 *Acute Dilatation of the Stomach. A. I. McKinnon, Lincoln, Neb.
66 *Plea for More Conservatism in Appendicitis as to Time of Operation, with Treatment of Acute Cases. O. Grothan, Kearney, Neb.
67 *Appendicitis. H. W. Quirk, Crete, Neb.
68 *Management of Placenta Prævia. C. Rosewater, Omaha, Neb.
69 Traumatic Gangrene. H. E. McCollum and H. L. Stevens, Laramie, Wyo.

64, 65, 66, 67. Abstracted in THE JOURNAL, July 4, 1908, pp. 67-68.

68. **Placenta Prævia.**—Rosewater describes the treatment of placenta prævia as follows:

In placenta prævia centralis use vaginal and cervical tamponade, separate a portion of the placenta and do version slowly, delivering the fetus after the hip has appeared; or go boldly through the center of the placenta and do a version as already outlined; or do a cesarean section, particularly if the os will not dilate.

In placenta prævia other than central, use vaginal and cervical tampons to control hemorrhage and dilate os; then do bipolar version; or if the vertex presents, simply rupture the membranes and if pains are good leave to nature the balance of the work; if the pains are weak apply forceps and deliver cautiously.

Check postpartum hemorrhage by intrauterine tamponade, ergotin, strychnin and massage of the uterus. Sustain and support patient all through progress of the case.

Analyzing the question from another standpoint, we have four indications to fulfill: (1) To check hemorrhage before or after delivery; (2) to deliver; (3) to prevent shock; (4) to prevent sepsis.

1. *To check hemorrhage.*—Use vaginal, and when possible, cervical, tampon of aseptic or iodoform gauze before delivery. After delivery check hemorrhage by delivering placenta and packing uterus with aseptic or iodoform gauze and give ergotin and strychnin hypodermically or by mouth.

2. *To deliver.*—Dilate os by tampon, water bag, or manually. Apply forceps if vertex presents and pains are insufficient. Perform version with slow delivery as indicated. Do cesarean section when os will not dilate and hemorrhage continues.

3. *To prevent sepsis.*—Be strictly aseptic in all details of management.

4. *To prevent shock.*—Stimulate and sustain patient all through labor by light, easily digestible food, strychnin, quinin, rectal enemata of normal salt solution or by hypodermoclysis.

Journal of the Indiana State Medical Association, Fort Wayne

March

70 *Etiology of Chorea. W. D. Hoskins, Indianapolis.
71 Tuberculin Therapy. W. T. S. Dodds, Indianapolis.
72 Sketches of the Medical History of Indiana (continued). G. W. H. Kemper, Muncie.
73 *Modern View of the Etiology and Treatment of Acne Vulgaris and Acne Rosacea. A. M. Cole, Indianapolis.
74 The Ocular Tuberculin Test. C. G. Beall, Fort Wayne.
75 Tuberculosis of the Kidney. E. Walker, Evansville.

70. **Etiology of Chorea.**—Hoskins gives a historical review of recent studies into the etiology of chorea, and as a result of these studies considers it to be a safe, logical conclusion that:

1. The causation of chorea is to be found in the action of bacterial poisons on the brain.
2. The available evidence points to the occurrence of a local infection to which these widespread changes in the nervous system are due.
3. The infection is of a rheumatic nature and is due to a specific organism—the *Diplococcus rheumaticus*.

73. **Acne Vulgaris and Acne Rosacea.**—Cole sums up and emphasizes the points of his paper as follows:

1. Acne vulgaris is usually a pyogenic infection implanted on a skin whose functions are perverted by the influence of age, reflex disturbances, or seborrhea.
2. Acne rosacea is an acne implanted on a chronic hyperemia or rosacea which rises almost invariably from reflex influences from the gastrointestinal tract or pelvis.
3. Internal treatment in both varieties of acne is exceedingly important. Reflex disorders must be sought for and corrected, if possible, before the best results can be obtained.
4. External drug treatment in both diseases is usually disappointing. Sulphur is the best external preparation.
5. Mechanical treatment, such as the use of hot water, soap, massage and the dermal curette is exceedingly valuable.
6. The opsonic method in acne vulgaris is promising.
7. The Roentgen treatment of both acne vulgaris and acne rosacea is the most valuable. In its certainty of cure and infrequency of relapse it almost approaches a specific.
8. The technic of using the *x*-ray, say in acne, is of paramount importance. If the ray is properly applied there should be few, if any, failures and no undesirable effects.

Journal of Advanced Therapeutics, Rahway, N. J.

March

76 Tuberculosis and Its Treatment. J. D. Gibson, Denver, Colo.
77 Gout: Its Treatment by High-Frequency Currents. F. A. Davis, Boston.
78 The X-Ray in Dental Examinations. S. Tousey, New York.
79 Cataphoric Operations as Modified by the Topographic Situation of Particular Neoplasms, with Detailed Report of Cases (continued). G. B. Massey.

April

80 The Physiologic Action and Therapeutic Effect of Vacuum Tube Discharges. J. H. Burch, Syracuse, N. Y.
81 Physiotherapy in the Practice of Medicine. W. McFee, Haverhill, Mass.
82 Catarrhal Deafness and its Treatment. A. C. Geyser, New York.

Vermont Medical Monthly, Burlington

March

83 *The Anatomic Basis for Successful Repair of the Female Pelvic Outlet. I. S. Haynes, New York.
84 An Interesting Case of Gonorrheal Arthritis Treated with Serum. H. E. Plummer, New York.
85 Character of the State Board Examinations and the Competency of the State Medical Examining Boards. W. G. Tucker, Albany.

83. **Repair of the Female Pelvic Outlet.**—Haynes discusses this subject at great length and with the assistance of many illustrations. Any plastic operation, to be successful, must have a solid anatomic basis. The one fundamental idea, the only rational aim, for the surgeon in all such plastic work, is to restore the damaged parts to their normal state. He reviews in detail the anatomy of the female pelvic outlet, and discusses the function of the structure concerned in it. He next considers lacerations of the pelvic outlet and their effects, and describes the technic of operation.

Pennsylvania Medical Journal, Athens

March

86 *Progress in Pediatrics. T. J. Elterich, Pittsburg.
87 *Malignant Tumors of the Tonsils. G. B. Wood, Philadelphia.
88 *Acute Mastoiditis. S. M. Smith, Philadelphia.
89 *Surgical Complications of Pneumonia, Especially Empyema. A. R. Matheny, Pittsburg.
90 The Public's Gain Through the Nostrum-Suppression Agitation. A. B. Hirsh, Philadelphia.

86. Abstracted in THE JOURNAL, Oct. 3, 1908, p. 1179.

87. **Malignant Tumors of the Tonsil.**—Wood reports two cases of sarcoma of the tonsil, discusses the operations for their relief, and gives an extensive table of published cases.

88. Abstracted in THE JOURNAL, Oct. 17, 1908, p. 1356.

89. **Complications of Pneumonia.**—Matheny discusses acute otitis media, pericarditis with effusion, parotiditis, abscess and gangrene of the lung and empyema as surgical complications of pneumonia. In regard to the last-named he especially emphasizes the need of early diagnosis of empyema from delayed resolution. The error is exceedingly common, whereas a hypodermic needle immediately clears up the diagnosis.

Washington Medical Annals

March

91 *The Bryce-Teacher Early Human Ova. A. F. A. King, Washington.
92 Internal Hemostasis: Its Physiologic and Pharmacologic Aspects. W. M. Barton, Washington.
93 Partial Review of Internal Medicine. S. Ruffin, Washington.
94 Review in Pediatrics for 1908. E. P. Copeland, Washington.
95 Case of Peculiar Delirium in Typhoid. F. E. Harrington, Washington.
96 The Value of Therapeutics. P. S. Roy, Washington.

91. **Early Human Ova.**—King discusses the observations of Bryce and Teacher in their memoir, with numerous figures and colored plates describing two early human ova, the one from a uterine and the other from an ovarian pregnancy. He suggests the extension of this research; for, while the facts of embryology may seem of little practical use, they may on the other hand be regarded as a reserve collection of old keys, one of which may at any moment unlock the door to a treasury of useful information. He suggests, therefore, that it may be well in all cases of delayed menses, even when pregnancy is not suspected, to examine the discharge for young ova, by breaking up the little clots in water and seeking for flakes of decidua with their contained blastocysts. A flake of membrane, no larger than a finger nail, containing an elevated tubercle the size of a pinhead is the thing to look for, as shown in the case of Bryce and Teacher. Should such a specimen be found, it should be immersed in a 30 per cent alcohol solution and sent to a skilled microscopist.

Providence Medical Journal

March

97 Displacement of the Uterus. H. C. Pitts, Providence.
98 Treatment of Uterine Displacements. A. T. Jones, Providence.
99 Blood Transfusion. L. C. Kingman, Providence.
100 *General Purulent Peritonitis. D. Churchill, Providence.
101 Medical Education in Berlin: Advantages Open to American Students. H. G. Palmer, Providence.

100. **Purulent Peritonitis.**—Churchill reports three cases and discusses the treatment of generalized purulent peritonitis, emphasizing the following points:

1. Operate quickly, making an opening into the abdominal cavity, with the single purpose of letting out the confined septic material. If the exciting cause is easily at hand and can be quickly dealt with remove it; if not, do not seek it.
2. Drain with one drain to the lowest point.
3. Put the patient into the Fowler position, so that the material to be drained shall fall to that lowest point.
4. Give nothing by mouth.
5. Give normal saline solution by rectum by the drop method constantly.
6. Do not give cathartics or enemas.
7. Do not be afraid to keep the patient comfortable and quiet with morphin.
8. Always keep in mind that the one thing you are trying to do in these cases is not an elaborate operation, but to save life.

Detroit Medical Journal

March

102 Diagnosis of Chronic Appendicitis. R. R. Smith, Grand Rapids.
103 Psychotherapy and Its Relations. C. W. Hitchcock, Detroit.
104 Why Benzoate of Soda is Used. E. E. Smith, New York.

Memphis Medical Monthly

March

105 Therapeutic and Diagnostic Use of Tuberculin. L. P. Barbour, Rocky Ford, Colo.
106 A Dermoid Tumor of the Conjunctiva. E. C. Ellett, Memphis.
107 Nervous Diseases Complicating Pregnancy and the Puerperium. S. T. Rucker, Memphis.
108 Tuberculosis Treated at Home. A. E. Cox, Helena, Ark.
109 Social Hygiene. O. Wilson, Paragould, Ark.

Woman's Medical Journal, Toledo, O.

March

110 *Causes Leading to Mental Degeneracy. B. C. Downing, Lexington, Mass.
111 The Incubator Baby. M. A. Nickerson, Rochester, N. Y.
112 Protective Power of the Opsonins. J. K. Qua, Amsterdam, N. Y.

110. **Causes of Mental Degeneracy.**—Downing compares the race origin in subjects of degeneracy and of insanity, and quotes Hrdlicka to the effect that in mental defectives the relative proportion to the total population is not at all, or but slightly, affected by immigration. On the other hand, in New York State 50 per cent. of the insane are of foreign parentage and 30 per cent. foreign born. The question arises:

What is the proportion of the two populations not insane? Downing thinks that we are inclined to exaggerate the causes of insanity if we do not recognize the defective nature of the immigrants, who come here because they are usually defectives and failures at home. Insanity is obviously increasing. In all cities the conditions exist which can cause nervous exhaustion and brain disease, but she points out that no one has ever called attention to the fact that modern cities have produced an environment for which the blonde type of man and some of the lighter brunettes are physically unfit. The large majority in the middle United States of congenital feeble-minded are blondes, while in Poland they are brunettes. The deterioration in the tropics is but a minor degree, and the resulting insanity is the same, melancholia predominating and indicating exhaustion as the cause. Downing calls attention to Woodruff's views on the effect of tropical light on the white man. She discusses heredity, tuberculosis and syphilis, alcohol, the period of birth, early and late marriage, order of birth and birth injuries, bottle feeding, race intermixtures, acute diseases, circulatory conditions and pigmentation in regard to their influence on mental conditions. She also discusses the fevers of feeble-minded children based on 1,000 cases, and particularly tne condition of the nervous child. Children should be classified in schools by types rather than by age. Training classes should be established to fit physicians for school inspection. The feeble-minded should be weeded out into colonies. The education of children should be according to their individual needs; all do not need kindergartens or physical culture or sloyd. Where, she asks, is the university that will establish a department for the solution of these problems?

Journal Oklahoma State Medical Association, Guthrie

March

113 Disturbances in Equilibrium of External Ocular Muscles. E. F. Davis, Oklahoma City.
114 Sphenoidal Sinus Diseases. J. H. Barnes, Enid.
115 Glaucoma. W. M. Nagle, Muskogee.
116 Experiences in Cataract Extraction, Preceded by Iridectomy. A. D. Johannes, Ok'ahoma City.
117 Diagnosis in Purulent Diseases of the Nasal Sinuses. H. C. Todd, Oklahoma City.
118 Biliousness. I. H. Voris, Mannsville.

Journal of Cutaneous Diseases, New York

March

119 *Tuberculides in Relation to General Tuberculosis. A. Ravogli, Cincinnati.
120 Eczema of the Toes. E. W. Ruggles, Rochester, N. Y.
121 *Xanthoma Multiplex. J. M. Winfield, Brooklyn, N. Y.

119. **Tuberculides and General Tuberculosis.**—Ravogli concludes, from his consideration of the tuberculides, that typical tuberculides have to be separated from the atypical variety. Typical tuberculides are of the erythematous and papulonecrotic type, generalized, affecting large surfaces of the body. They are the expression of general tuberculosis, but they bear no influence on the general disease.

121. **Xanthoma Multiplex.**—Winfield describes a case of a child of 4 years, born in America of Russian-Jewish parents. He describes the eruption and microscopic examination, and discusses the subject of xanthoma, stating as conclusions, drawn after a careful study of this case in the light of the literature, that xanthoma multiplex is not identical with xanthoma palpebrarum, and that the three types are not similar except in clinical appearances, *i. e.*, the saffron-colored tumor. He agrees with the view that xanthoma multiplex is a distinct disease, a benign tumor of non-inflammatory origin.

Wisconsin Medical Journal, Milwaukee

March

122 *Modern Operation for the Cure of Inguinal Hernia. E. W. Andrews, Chicago.
123 *Carcinoma of the Breast. C. W. Oviatt, Oshkosh.
124 *Exceptions to the Rules in the Administration of Certain Drugs. W. G. Kemper, Manitowoc.
125 *Some Phases of the Practice of Medicine of To-day. W. S. Lincoln, Dodgeville.

122. Published in the *Northwestern Lancet*, Jan. 1, 1909.

123, 124, 125. Abstracted in THE JOURNAL, Aug. 8, 1908, p. 524.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

April

126 *Hernias Through the Pelvic Floor. C. W. Barrett, Chicago.
127 *Amputation of the Uterus in the Corpus to Preserve the Menstrual Function. H. Kelly, Baltimore.
128 *The Origin of Certain Types of Monsters. C. R. Stockard, New York.
129 *Preliminary Report on the Use of Bacterial Vaccines in Treatment of Septic Infections. F. R. Oastler, New York.
130 Three Rare Surgical Complications of Pregnancy. J. F. W. Ross, Toronto, Canada.
131 *Endometritis. J. J. Mundell, Anacostia, D. C.
132 Floating Kidney in its Relation to Pelvic Disease. A. H. Ely, New York.
133 *Treatment of Movable Kidney. L. G. Baldwin, New York.
134 Gangrene of a Pedunculated Subserous Uterine Myoma with Twisted Pedicle. R. T. Gillmore, Chicago.
135 *Lesions of the Cornea in Gonorrheal Ophthalmia and Phlyctenular Keratitis. C. W. Cutler, New York.
136 Importance of Dental Orthopedics in the Normal Development of the Child. F. A. Gough, Brooklyn, N. Y.

126. **Pelvic Hernia.**—Barrett discusses the embryology and comparative anatomy of the pelvic floor, the principles to be considered in the cure of hernia, describes the technic of the repair of the pelvic floor, and lays particular emphasis in the following points:

1. The pelvic floor, while not a direct support to the uterus, is an important factor in abdominal support.
2. Comparative anatomy and clinical research demonstrate the importance of the levator ani muscle in pelvic floor support.
3. The pelvic floor support is weakened by the passage through it of certain canals called "faults."
4. The vagina may and oftentimes does become a hernial canal.
5. This tendency is greatly increased by traumatism and to a less extent by congenital defects.
6. This tendency is further increased by increased abdominal pressure, a displaced uterus, and a vertical vagina.
7. These hernias, when slight and incipient, should be treated by rest, lessening of intra-abdominal pressure, by reducing fat, curing a cough, the knee-chest positions, tampons, pessaries, etc.
8. When more extensive or when resisting treatment, the pelvic floor should be repaired, the cystocele should be reduced, the vagina made less vertical, and the uterus put at an angle with the vagina or removed according to the condition of the uterus, age of patient, etc.
9. If hysterectomy is performed the stumps of ligaments should be united to the upper part of the vagina.
10. Two points should be observed in the herniotomy of the pelvic floor: (a) the levator muscle should be reunited; (b) superficial vulvar structures should not be united, but left with the natural vulvar opening into the vagina, which may easily be accomplished by making the U-shaped incision at the lower end of the vagina instead of the usual incision in the labia majora.

127. Abstracted in THE JOURNAL, July 4, 1908, p. 71.

128. **Monsters.**—Stockard discusses the origin of monsters and describes his own experimental study of the influences of strange external conditions on development.

129. **Bacterial Vaccines in Septic Infection.**—Oastler summarizes his article as follows:

1. Apparently favorable clinical results have been obtained in the use of vaccines of streptococcus, staphylococcus, *Bacillus coli communis*, *Bacillus mucosus* and gonococcus.
2. All but gonococcus vaccine should be autogenous.
3. Vaccines are not "cure-alls" but seem to aid materially in combating the septic process, the effect being gradual and progressive.
4. Vaccines are required especially when the blood shows poor resistance, i. e., low leucocyte count and high polymorphonuclear.
5. In violent cases of acute sepsis, no resistance can be created, and no effect obtained.
6. The negative phase is rarely obtained.
7. The positive phase is more often obtained.
8. Blood cultures are generally negative.
9. Wound discharge increases soon after injections.
10. Good results have been obtained with all the organisms tried; the least satisfactory were with the *Streptococcus longus*.
11. The pulse may remain rapid for some time after the temperature falls.
12. As yet there have appeared no ill effects from injections.
13. The dose is problematic and purely experimental. The site of the injection is the same, as is also the frequency. Too large a dose does harm, and small doses give better results than large doses.
14. Dosage: every fourth day. Staphylococcus, 160,000,000 to 325,000,000; streptococcus, 40,000,000 to 80,000,000; *B. coli communis*, 40,000,000 to 150,000,000; *B. mucosus*, 40,000,000 to 110,000,000; gonococcus, 6,000,000 to 80,000,000.
15. If negative phase appears, delay injection and reduce dosage.
16. The opsonic index is uncertain. Leucocyte count with polymorphonuclear count gives the best indication of the resistance of the patient.

131. **Endometritis.**—Mundell says that the classification of endometritis should be acute and chronic. Further subdivision leads to much confusion and does not materially aid the clinician. Uncomplicated cases are not very common and an uncomplicated chronic case is a very rare condition. Normally, the endometrium is free from bacteria. Treatment of chronic endometritis, to be successful, should always be car-

ried on in conjunction with the treatment of associated conditions.

133. **Movable Kidney.**—Baldwin's opinion is that movable kidney has had much laid at its door for want of an accurate diagnosis that should rightly have been charged to other organs and conditions; that operation is seldom the best means of treatment, and that the sooner we place "movable kidney" in the class with "dropsy," "leucorrhea," and, he suggests, "prolapsed ovary," and treat it as a symptom of an often very complex pathologic condition, the sooner shall we come to an understanding of its true significance and its proper cure.

135. **Lesions of the Cornea.**—From a comparative study of gonorrheal ophthalmia and phlyctenular keratitis, Cutler is convinced that more eyes are damaged by phlyctenular keratitis than by gonorrhea. Of course, the injury is not so severe, but an opacity or a facet in the pupillary zone among the children of the poorer classes is so common and is such a serious hindrance to higher economic usefulness, that the attention of the general practitioner and of the public may well be drawn to these fleeting and apparently insignificant eruptions.

Louisville Monthly Journal of Medicine and Surgery

April

137 Systemic Effects of Chronic Infections of the Throat and Nose. F. G. Stubbs, Chicago.
138 Cases of Progressive Pernicious Anemia. J. A. Witherspoon, Nashville, Tenn.
139 Traumatic Cataract in Children. A. P. Pfingst, Louisville.
140 Surgical Diseases of the Kidney. J. G. Sherrill, Louisville.

Military Surgeon, Richmond

April

141 *Sanitary Organization of the Isthmian Canal as it Bears on Antimalarial Work. W. C. Gorgas, U. S. Army.
142 Hygiene of Torpedo Boat Destroyers in the Philippines. F. M. Munson, U. S. Navy.
143 Care of the Chelsea Refugees. P. F. Butler, Boston.
144 Iron Aristol for Chronic Skin Ulcers. M. J. White, U. S. Public Health and Marine-Hospital Service.
145 *Blastomycosis of the Skin in the Philippines. J. M. Phalen and H. J. Nichols, U. S. Army.
146 The Medical Log of the U. S. S. *Virginia* on the Cruise to the Pacific. C. H. T. Lowndes, U. S. Navy.
147 Mosquito Bars. G. F. Campbell, U. S. Army.
148 Cocain: Its Relation to the Military Surgeon. W. D. Owens, U. S. Navy.
149 Plea for Specialism. E. R. Vedder, U. S. Army.
150 Sanitary Service of the Swiss Army. L. C. Duncan, U. S. Army.
151 Color Blindness. W. S. Hoen, U. S. Navy.
152 Origin and Beginnings of the *Military Surgeon*, with Notes on Life and Character of its First Editor. W. G. Ames.

141. **Isthmian Canal.**—Gorgas says that the antimalarial methods used on the isthmus consist (in the order of their importance) in:

1. Destroying the habitat of the anopheles during the larval stage within a hundred yards of dwellings.
2. Destroying within the same area all protection for the adult mosquito.
3. Screening all habitations so that the mosquito can not have access.
4. Where breeding places can not be done away with by draining, use is made of crude oil and sulphate of copper for the destruction of larvæ.

He describes the work of the sanitary staff in carrying out these measures and shows its effect on the malaria morbidity of the isthmus. He thinks that to a considerable extent these methods could be applied in military organizations. The most important practical point is that the sanitary officer should do the work himself; until such time as education is extended, the supervision can not be trusted to the engineer or the quartermaster, for in general, the laity are inclined to look on the minutiæ of such work as trivial and to cast ridicule on it.

145. Published in the *Philippine Journal of Science*, November, 1908.

Journal of the Kansas Medical Society, Kansas City

April

153 Operative Displacement of the Bladder in the Treatment of Extensive Cystocele. F. A. Carmichael, Goodland, Kan.
154 Early Diagnosis of Tuberculosis. S. C. Emley, Lawrence, Kan.
155 Doctors and Medicine—Past and Present. J. Dillon, Eureka, Kan.
156 Abnormalities of the Gravid Uterus and Their Treatment. F. A. Harper, Pittsburg, Kan.
157 Gunshot Wounds of the Chest. R. S. Magee, Topeka, Kan.

St. Paul Medical Journal

April

158 *Embryology of the Face and Neck Region, with Reference to Congenital Malformations. A. Schwyzer, St. Paul.
159 *Preparation and After-Care of Surgical Patients. J. C. Munro, Boston.
160 The Ramsey County Medical Society; Its Privileges and Its Duties. A. Sweeney, St. Paul.
161 Diphtheria. T. C. Kelly, Mankato, Minn.

158. **Embryology of Face and Neck.**—Schwyzer describes the embryology of the face and neck and traces its influence in the formation of nasal furrows and clefts, harelip, transverse cleft through the cheek, median cleft of the lower lip and eventually of the lower jaw, the formation of diverticula, fistulas and cysts of the neck and pharynx, etc.

159. **Preparation of Patient.**—Munro prefers patients to enter hospital in the afternoon before operation. They are kept busy, not upset by change of diet and habit, and do not lose their *morale* by introspection. He believes that the patient who is allowed to sit around hospital day after day stands operation poorly compared with one who comes in last thing and takes it in a business-like fashion. A similar parallel may be drawn in the case of those kept in hospital after necessity for definite hospital treatment has ceased. He advises always endeavoring to obtain a general consent to be allowed to use one's own judgment as to what shall be done at operation. The patient is given a hot tub bath, has a simple supper, and is given from 1½ to 2 ounces of castor oil soon after entrance. The operative field is shaved at night or early in the morning, nervous patients being shaved under ether on the operating table. The wet antiseptic dressings have been abandoned except in operations on the head and on the knee joint. The scrubbing with stiff brushes also, soap poultices, etc., have been abandoned. Observation showed that during the period these precautions were being observed more cases healed by first intention and there were fewer stitch abscesses and the like among emergency cases that came covered with the dirt of the street and were hurriedly shaved and superficially cleansed, than among those submitted to this extreme toilet. Munro lauds the use of dry shaving and of tincture of iodin for painting the operation area, as recommended by Grossisch. Patients with jaundice are given salt solution and fresh rabbit serum before operation. Cardiac tonics are rarely called for, except in the occasional patient with a myocarditis, when digitalis is used. Strychnin as a stimulant has been given up, except in simple fainting, in which it seems especially useful. Practically all patients are given atropin and morphin when going under ether. A drop of castor oil may be put in each eye as a preventive against ether conjunctivitis, though this should not be necessary with a thoroughly trained anesthetist. Munro holds that the convalescence of major surgical patients depends to a considerable degree on the ability of the anesthetist, especially if ether is used. He anticipates the time when hospitals will have permanent instead of changing anesthetizers—"preferably a well-trained nurse who aspires to no higher position, and who can be utilized out of hours in other important work." He also discusses the after-treatment in detail and the question of disease complications.

Denver Medical Times and Utah Medical Journal

April

162 Management of Labor for Nurses. T. M. Burns, Denver.
163 Advantages of the Intravenous Over the Intramuscular Method in the Treatment of Tuberculosis with Mercury. J. Cuneo, Denver.
164 Origin of Bacteria. J. D. Crisp, Denver.
165 Value of Hourly Nursing to the Physician's Practice. F. E. Scoville, Denver.
166 Historical, Laboratory and Clinical Observations in Rocky-Mountain Spotted Fever. R. Anderson, Salt Lake City.
167 Tick Fever, or Rocky-Mountain Spotted Fever. G. W. States, Franklin, Utah.

St. Louis Medical Review

March

168 *Technic of Localizing Foreign Bodies in the Eye and Orbit by the *X*-Rays. R. D. Carman, St. Louis.
169 Diagnosis of Affections of the Labyrinth. C. F. Pfingsten, St. Louis.
170 Relationship of Law to Medicine. Gov. C. P. Johnson, Jefferson City.

168. **Localizing Foreign Bodies in the Eye.**—In an elaborately illustrated article, Carman describes Sweet's method for localizing foreign bodies in the eye, as modified by Dr. C. F. Bowen of Columbus and used in connection with the Weeks-Dixon chart. He insists on the importance of radiographing the eye as soon as possible after injury before photophobia has become pronounced.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

March 27

1 *Disinfection and Disinfectants (continued). R. T. Hewlett.
2 *Mechanism Underlying the Various Methods of Artificial Respiration (continued). A. Keith.
3 Tumor-Like Formations of Fat in Man and the Lower Animals. S. G. Shattock.
4 Abnormalities of Ocular Movements. J. H. Jackson and L. Paton.
5 Treatment of Nervous Diseases. J. Taylor.
6 Direct Esophagoscopy: A Unique Experience. H. Tilley.

1. **Disinfection.**—Hewlett discusses the nature of the process of disinfection and the regulation of the sale of disinfectants.

2. **Artificial Respiration.**—Keith deals with the period of mechanical movements of the chest wall, concluding with mention of Doe's method and a discussion of tongue traction. He describes the mechanism underlying Schäfer's method and suggests that experiments on the living subject do not give the conditions present in the apparently drowned who are in a state of profound anesthesia. The resiliency of the thorax differs in degree and in kind from that found in the living body, but while he holds it improbable that Schäfer's method will give a respiratory exchange in the apparently drowned at all equal to that which Schäfer obtained in living subjects, yet a sufficient change may be effected and the method deserves to be tried because of its simplicity. The quest for the best means of artificial respiration is by no means ended. We need more experimental evidence, more exact as to the results of methods now in general application, more clinical observations on the lungs and hearts of people being resuscitated, and more exact data on the condition of the body, especially of the lungs, heart and liver, in those cases in which all means have failed or secondary failure has occurred. He especially urges those engaged at fixed stations in the work of recovery, to measure accurately by meter the air exchange effected by the methods which they apply; so that, instead of having to trust to experiments carried out on perfectly healthy apneic individuals., we may have the actual effect of these methods in producing a ventilation in the lungs of the apparently drowned.

British Medical Journal, London

March 27

7 Natural History of Ulcerative Colitis and Its Bearing on Treatment. H. P. Hawkins.
8 *Amebic Dysentery with Abscess of the Liver. R. Saundby and J. Miller.
9 *Bilharziosis of Women and Girls in Egypt in the Light of the "Skin-Infection Theory." A. Looss.
10 Physiology of the Female Genital Organs. IV.—Uterine Contractions. W. B. Bell and P. Hick.
11 Local Anesthetics Recommended as Substitutes for Cocain. C. N. Le Brocq.

8. **Amebic Dysentery.**—Saundby and Miller report a fatal case of amebic dysentery that occurred in a man aged 42, who had never been away from the Birmingham district in England. The chief points of interest in the case were:

1. Ulcerative colitis, in which the smaller ulcers are circular and flask-shaped—*bouton de chemise* of French authors—with overhanging edges and relatively small circular openings into the lumen of the bowel, and adherent sloughs; one of the larger ulcers had perforated into the peritoneal cavity.
2. The presence of an enormous abscess in the posterior part of the liver, the pus of which gave no growth on inoculating in ordinary media.
3. Last, and most important, the presence of amebas in the ulcers and the liver abscess and in the tissues around these lesions.

As to the mode of infection, the authors point out that, given a case of tropical dysentery—and such cases are from time to time imported into England—there is a possible source of infection from which contamination of food or drink during warm weather might take place. As the ameba readily dies at temperatures below 75 F., it rarely spreads, even when imported; but that such spread can take place they hold the case in point to demonstrate.

9. **Bilharziosis of Women.**—Looss discusses the paper of Mrs. B. S. Helgood on bilharziosis among women and girls of Egypt, from the viewpoint of the "skin infection theory," and summarizes his conclusions as follows:

1. Any theory about the mode of infection with bilharziosis, in order to be at all acceptable, must (a) account for the passage of the miracidium both from man to water and from water back to man; it must (b) duly consider both the habits of the host and the biologic peculiarities of the parasite.
2. The theory of the infection taking place by the mouth (along with food and drink) must be refuted, because it is irreconcilable (a) with certain biologic peculiarities of the miracidium, (b) with the general distribution of the disease among the population of Egypt.
3. The theory of infection by the miracidium entering the urethra or the anus is (a) utterly improbable for general parasitologic reasons; (b) in contradiction with a number of biologic and anatomopathologic facts (for example, the incapability on the part of the miracidium to resist the action of acids, even if very diluted; the part played in the infection by the liver, etc.).
4. The theory of infection by the skin is in accordance with all the facts thus far known (a) of the biology of the parasite, (b) of the distribution of the disease among the population (native and foreign, town and rural) of Egypt. It shows (c) how the chief sufferers—the children in town, the adult males in the country—live under conditions which, from the epidemiologic point of view, are essentially the same, and give the miracidia (d) the opportunity of passing, within the short time of their life, from man to water and from water back to man.

Medical Press and Circular, London

March 24

12 Tertiary Syphilis in the Upper Air Passages. H. Law.
13 Differential Diagnosis and Inoculation Treatment of Tuberculous Glands in the Neck. L. C. P. Ritchie.
14 Early Diagnosis and Surgical Treatment of Cancer of the Stomach. D'A. Power.
15 Early Diagnosis of Cancer of the Stomach. A. F. Hertz.
16 Medical Examination of School Children. G. Carpenter.

Clinical Journal, London

March 17

17 Pernicious Anemia. W. P. Herringham.
18 Use of Congestion in Treatment: Its Disadvantages in Varicose Veins, Varicocele, Hernia, Hemorrhoids, Hydrocele, Etc. E. M. Corner.
19 Trigeminal Neuralgia and its Treatment by Schlösser's Method. P. Stewart.
20 *Popliteal Aneurism. E. Owen.

March 24

21 Dyspepsia Due to Alcoholic Abuse. Sir D. Duckworth.
22 Athletics in Relation to Disease. R. H. A. Whitelocke.

20. **Popliteal Aneurism.**—Owen reports an exceedingly interesting case of popliteal aneurism, illustrating the moral that popliteal aneurism by no means invariably calls for operation. About 20 years ago a surgeon in general practice, about 65 years of age, strong and athletic, had a recent varicose condition of the external saphena vein. The dilatation was found to be due to pressure by a large popliteal aneurism, of which the patient had no knowledge. His radial and femoral pulses showed considerable arterial tension and his heart's action was excited and tumultuous. He was sent home to bed. Mr. Savory agreed with Owen that operation was inadvisable. They contented themselves, therefore, with raising the foot of the bed to help venous return, laying the limb on a pillow. The only medicine prescribed was calomel. Nevertheless the aneurism increased in size, and amputation in the lower third of the thigh was decided on in case of bursting or mortification; but neither contingency arose, though the foot and leg became cold and pulseless. The aneurism eventually grew still and solid. After the patient had been in bed about ten days, the other popliteal artery became aneurismal. This was treated by a firm pad at the back of the knee, and by keeping the leg firmly flexed. In the course of a few days the second popliteal artery became solid, like the first, and pulsation disappeared in the arteries at the ankle. The patient made a complete recovery, and a few years later Owen saw him running after an omnibus.

British Journal of Children's Diseases, London

March

23 *The Need for More Prompt and Thorough Treatment of Children Suffering from Rheumatism or Chorea. D. B. Lees.
24 Syphilitic Synovitis. J. B. Barrett.
25 Forms of Chronic Lung Disease in Childhood (continued). W. H. M. Telling.

26 *The Heating of Milk as It Affects the Nutrition and Health of the Infant. J. M. Fortescue-Brickdale.
27 Epithelioma Developing in the Scar of a Plastic Operation for Extroversion of the Bladder. P. Sargent.
28 The Origin of the Feeble-Minded. W. A. Potts.

23. **Treatment of Rheumatism or Chorea in Children.**—Lees says that almost the whole of the heart disease which exists in patients under 30 years of age, as well as a very considerable proportion of the heart disease of later life, is the result of rheumatic infection of childhood that was either unrecognized or uneffectively treated. Every child who complains of sore throat or of pains in the joints, muscles or tendinous structures, every child who suffers from malaise and unexplained pyrexia, every child whose skin shows spots of erythema or who has subcutaneous nodules on his tendons or round his joints, or subperiosteal nodules on his bones, every child who has pain in the chest, or shortness of breath, or marked pallor, and every child exhibiting even slight choreic movements or merely weakness and inco-ordination of muscular action or emotional instability should be at once put to bed, and his heart should be promptly and most carefully examined. Lees cites Poynton and Paine's demonstration of a diplococcus in rheumatism and chorea which is capable of producing in rabbits, not merely endocarditis, but cardiac dilatation, myocarditis, pericarditis, arthritis, pleurisy and pneumonia, also subcutaneous nodules and tenosynovitis; in short, all the severe lesions found in a rheumatic child. He adds two facts within his own knowledge: (1) A rheumatic nodule excised from a child, which gave on culture an exuberant and pure growth of a diplococcus; (2) the obtaining of a diplococcus from the blood in more than one case from rheumatic patients during life. With regard to chorea, although it has not yet been proved that chorea in a child is in all cases of rheumatic origin, yet it is quite certain that the great majority of cases are due to a rheumatic infection. Every case of chorea in childhood ought, therefore, to be considered as presumably rheumatic, and ought to have the benefit of this probability. Every such patient ought to be at once sent to bed, and treated vigorously as for rheumatism.

26. **The Heating of Milk.**—Fortescue-Brickdale deals with the alterations in the physicochemical character of milk produced by heat, not with the effect of heat on bacteria or their products. He divides the alterations into three groups:

1. Obvious taste in change and color, due to action of heat on lactose and the formation of a "skin," from the drying of protein on the surface—these are of little importance.
2. The precipitation of calcium and changes in organic phosphorus compounds. Heated milk is less acted on by pepsin and trypsin and probably less easily absorbed. The physiologic effect of changes in phosphorus is not well known, but since it is needful to the human infant, and cow's milk is poor in organic phosphorus the decomposition of these compounds may be considered a detriment.
3. Changes concerning the "vital" properties of milk. These are the least easily detected of all. Enzymes, agglutinins and precipitins are destroyed and phagocytosis by the milk cells is abolished.

The inhibitory power of fresh milk on bacterial growth is also destroyed. Clinical opinion, especially in Europe, is steadily coming to the view that clean fresh milk is better for infants than heated milk. Anemia, constipation and pyelitis are more frequently met with in children brought up entirely on sterilized milk.

Bristol Medico-Chirurgical Journal

March

29 *Metastatic Inflammations of the Eye. J. H. Parsons.
30 *Causes of Transient Cerebral Paralyses. G. Parker.
31 *The Physique of Boys. B. M. H. Rogers.
32 *Thomas Dover: Physician and Merchant Adventurer. J. A. Nixon.
33 Vomiting Connected with Anesthesia. A. L. Flemming.
34 Milk from a Public-Health Standpoint—City of Bristol. D. S. Davis.
35 Adulteration of Milk in Bristol. E. Russell.
36 Some Impurities of Vended Milks. I. W. Hall.
37 Value of Some Lactic Acid Ferments. W. Hall and W. A. Smith.
38 Precautions to be Observed in Administration of Milk in Disease. J. M. Clarke.
39 *Heating of Milk as It Affects the Nutrition and Health of the Infant. J. M. Fortescue-Brickdale.

29. **Metastatic Inflammations of the Eye.**—In the Long Fox Lecture Parsons takes up this subject, by which he means inflammations of the eye due to bacteria or to toxins derived from a source in some other part of the body. He does not include transmission by direct continuity, though in cases in which the meninges of the brain are affected it is not always easy to eliminate this mode. The other paths open are by the lymph and blood streams; the former is rare. He discusses ocular tuberculosis, gonorrheal iritis, iritis due to streptococcic septicemia, in illustration of the selectivity of site in metastatic inflammation of the eye; tubercle affections of the chorioid in two forms, miliary and conglomerate, or solitary. In tuberculous meningitis the chorioidal affection must be regarded as a true metastasis. Conglomerate tubercle of the chorioid is of particular importance in the clinical diagnosis of metastatic endophthalmitis. The pneumococcic cases emphasize another feature of metastatic inflammation of the eye, on which Parsons lays special stress, namely, the strong tendency for endogenous bacterial metastases to undergo spontaneous resolution. Metastatic ophthalmia was far commoner in the days when puerperal fever and pyemia were rife, and was more frequent in the former than in the latter disease. An example of undoubted metastatic inflammation of the eye is found in so-called pseudoglioma. He discusses iridocyclitis, which is undoubtedly often a result of gross metastatic inflammation, and inquires whether the apparent idiopathic cases may not be due to a similar cause. One group is undoubtedly dependent on pyorrhea alveolaris. Other foci are found in the nasal sinuses and, especially in women, in the generative organs. Finally, he thinks that the bacterial metastatic theory best explains the facts in the case of sympathetic ophthalmia.

30. **Transient Cerebral Paralyses.**—Parker tabulates the causes of transient cerebral paralyses as follows:

A. CEREBRAL ANEMIA OR STASIS

1. General, produced by—(i) compression of the vessels of the neck; (ii) cardiac or respiratory failure; (iii) general vasomotor paresis; (iv) asphyxia by carbon dioxid and similar bodies.
2. Local obstruction or compression of cerebral vessels from—(i) arteriosclerosis or atheroma; (ii) syphilitic thickening; (iii) tumors and foreign bodies; (iv) effused blood and the edema of softening; (v) uremic edema and hydrocephalus; (vi) inflammatory effusions, as in meningitis; (vii) certain small emboli; (viii) possibly spasm in Raynaud's disease and migraine.

B. THE ACTION OF POISONS, EXHAUSTION OF NERVE CENTERS, AND UNKNOWN CAUSES AS SEEN IN:

(1) Narcotic poisoning; (2) hysteria; (3) eclampsia; (4) general paralysis, myasthenia gravis; (5) postepileptic states, some forms of *petit mal;* (6) chorea paralytica; (7) lead encephalopathy; (8) recurrent paralysis of the third nerve.

31. **The Physique of Boys.**—Rogers' paper is a comparative study of the heights, weights and chest measurements of boys 13, 14 and 15 years of age in industrial and public schools.

32. **Thomas Dover.**—Nixon gives an interesting account of the career and adventures of the celebrated inventor of Dover's powder. He particularly protests against the ascription to him of the character of the buccaneer, or pirate, and says that "the expedition on which Thomas Dover sailed was in no sense of a piratical nature; it was one of those adventurous trading cruises of which Hakluyt in his Principal Voyages of the English Nation gives many instances."

39. See Abstract No. 26.

Journal of Tropical Medicine and Hygiene, London

March 15

40 A New Biting Fly. A. Balfour.
41 An Avian Hemoprotozoon. S. Neave.
42 Remarks on Drs. Broden and Rodhain's Paper on *"Porocephalus Moniliformis."* L. W. Sambon.
43 *Climate (Meteorologic Environment) as a Possible Cause of Pyrexia. M. D. O'Connell.

43. **Climate as a Possible Cause of Pyrexia.**—O'Connell discusses the manner in which a saturated atmosphere of 45 C. (113 F.) may cause pyrexia, the source and regulation of body temperature in health, the quantity of water in the body and its excretion, the effect of meteorologic environment on the amount of water in the blood and tissues and therefore on body temperature, the relation of meteorologic environment in nature—i. e., climate—and pyrexia, and in-

creased hemolysis from the excessive water in the blood. He holds that the belief is justified, that exposure to the hot, damp atmosphere found at certain seasons of the year in hot, and to a less extent in warm, climates, obviously produces: (1) Pyrexia of an intermittent type; (2) increased hemolysis or blood destruction; (3) the appearance in the blood of many abnormal forms of corpuscles; (4) increased production of pigment or melanemia; (5) enlargement of the spleen.

Annales de Médecine et Chirurgie Infantiles, Paris

March 1, XIII, No. 5, pp. 145-180

44 *Sclerosis in Patches in Children. (Etude de la sclérose en plaques infantile.) M. H. Gaenlinger. Commenced in No. 4.

44. **Sclerosis in Patches in Children.**—Gaenlinger analyzes the eighty-five cases of sclerosis in patches in children that have been recorded and comes to the conclusion that none of them actually merits this diagnosis. He does not assert that sclerosis in patches never occurs in children, but is confident that none of the cases reported to date belongs in this category. Oppenheim suggests that the affection may commence in childhood, but run such an insidious course that its existence is not suspected until adult age. Gaenlinger summarizes the details of all the material on record with full bibliography.

Archives Générales de Chirurgie, Paris

February, III, No. 2, pp. 111-220

45 *Aneurism of the Hepatic Artery. C. Villandre. Commenced in No. 1.
46 *Tumor of the Cerebellum in Children and its Surgical Treatment. (Tumeurs du cervelet chez l'enfant.) Berthaux and Burnier. Commenced in No. 1.
47 *Multiple Osteogenic Exostoses. A. Reubsaet.

45. **Aneurism of the Hepatic Artery.**—Villandre says that in 37 cases of aneurism in the hepatic artery, of which the details are known, the lesion was outside the liver in 34 instances and generally in the main trunk. Pain, hemorrhage in the digestive tract and jaundice are the chief signs of rupture of an aneurism in the hepatic artery. The pain is spontaneous and occurs in crises and paroxysms, ranging from a simple sensation of oppression in the epigastrium to excruciating agony. There is no radiation as with gallstone colic; the pain remains localized in the epigastrium or right hypochondrium. It is the initial symptom and may come on very gradually at first. If it suddenly becomes very intense the aneurism must have ruptured into the peritoneum or bile passages. The jaundice is due to compression of the outlets for the bile or their obstruction by clots. The aneurism gives no external sign of its presence, as a rule, being generally small and deep. The correct diagnosis has been made in only one case to date during life. In the majority of the cases the aneurism developed after some infectious disease, generally pneumonia or typhoid fever. If the hemorrhagic stools are the only symptom, the occurrence of hematemesis, followed by jaundice, suggests the true diagnosis. In some cases on record, the only symptom was chronic jaundice. Seven surgeons have published descriptions of their technic for operating in cases of aneurism of the hepatic artery, but Kehr alone operated on a certain diagnosis. The results of the few operations to date indicate that the hepatic artery can be ligated or obliterated without entailing necrosis of the liver, and Villandre's experiments on dogs confirm this assumption on condition that the liver has been gradually prepared for this shutting off of the circulation by this route and collaterals have had time to develop—this explains the success in Kehr's case. When the circulation in the hepatic artery is shut off abruptly, as by an embolus, necrosis of the liver is almost inevitable as there is no time for collateral circulation to develop. An aneurism in the hepatic artery is dangerous less from its size than from the tendency it displays to invade and dissect adjacent organs, especially the biliary passages. It generally ruptures into the digestive canal and then is presented the triad of pain, hemorrhages and jaundice; the aneurism may rupture into the peritoneum. Prompt surgical intervention is the only means to save the patient, and Villandre outlines the most promising technic for the purpose, summarizing, in conclusion, thirty-six cases from the literature, with the bibliography.

46. **Tumors of the Cerebellum in Children.**—Berthaux and Burnier review the history of operative treatment of tumors in the cerebellum and discuss the etiology and pathology, diagnosis and treatment, especially for cerebellar tumors in children. They have collected fifty-six operative cases of these tumors in children and summarize the details, commencing with one reported by Berthaux. The patient was a boy of 9 with a syphiloma in the left lobe of the cerebellum. The headache diminished under vigorous specific treatment, but the other symptoms persisted and a posterior craniectomy was done, but the removal of the tumor was postponed to a second operation. The child did not rally and succumbed three hours later. In 13 cases of cyst in the cerebellum all but one of the patients recovered after operative removal of the cyst, as also in a case of hydatid cyst. In 17 cases of glioma in the cerebellum in children 5 were cured by the operation, but one of these has developed a recurrence since. In 9 cases of a tubercle in the cerebellum, one of the patients, a youth of 18, was restored to comparative health by removal of an irregular tubercle in the left lobe of the cerebellum; the other patients all died. In 9 of fibroma or sarcoma 2 of the children were cured by removal of the tumor, 7 succumbed during or soon after the intervention. In 4 cases of probable tumors, one of the patients died of hemorrhage, but the others recovered after puncture and draining although no tumor was discovered. In 2 other cases in which the children did not long survive the operation the tumor was not examined after its removal. Out of the entire total of 56 cases there are thus 17 in which the children were cured by the operation. Great improvement was obtained in a few others. In the 13 cases of cysts the operation was done too late to save the eyesight in 5 cases, and these children were and remain blind.

47. **Multiple Exostoses.**—Reubsaet reports a typical case in a young man and compares it with twenty-one similar ones on record. When the exostoses are of tuberculous origin they are inclined to be painful, to undergo phases of inflammation, and sometimes to suppurate. In rachitis, the epiphyses may swell and there may be malformation of various bones, but no true exostoses. Syphilis causes hyperostoses but not exostoses. The hypertrophy of the bone in syphilis is extensive and diffuse, while the typical osteogenic exostoses under discussion are localized and circumscribed. If there is compression of a nerve or interference with the movements of a joint, it may be necessary to apply the knife to some exostosis. P. Marie suggests that thyroid treatment might have some influence during the cartilage stage, before the bone tissue is definitely formed. He has had no success with radiotherapy or serum treatment. In the case reported in detail there was marked eosinophilia.

Bulletin de l'Académie de Médecine, Paris

March 9, LXXIII, No. 10, pp. 295-321

48 *Epidemic of Cerebrospinal Meningitis at Paris. Efficiency of Antimeningococcus Serum. A. Netter and Vaillard.

48. See Paris Letter, THE JOURNAL, April 3, p. 1119.

Presse Médicale, Paris

March 20, No. 23, pp. 203-208

49 History of Medical Inventions. (Leçon d'ouverture. Cours d'histoire de la médecine et de la chirurgie.) A. Chauffard.

Semaine Médicale, Paris

March 17, XXIX, No. 11, pp. 121-132

50 *Hepato-cholangio-duodenostomy. Lejars.
51 *Surgical Treatment of Cerebral Hemorrhage. J. Lhermitte.

March 24, No. 12, pp. 133-144

52 *Pathologic Physiology of Traumatic Pleural Hematoma: Local Hemolytic Icterus. (Biligénie hémolytique locale.) G. Guillain and J. Troisier.

50. **Hepato-cholangio-duodenostomy.**—The experience with the case reported shows that this operation has a chance for success only when the intercellular passages in the liver are found much dilated. The operation is necessarily rare and

generally a last resort in cases of old and total obliteration of the bile ducts outside of the liver. There is danger of infection of the raw surface of the liver thus united with the intestine. No infection occurred in the operations on animals that have been reported, but the animals were healthy; the conditions are different in the clinical cases in which the patients are debilitated from the long causal trouble. He ascribes the fatal termination of the case in his own experience to this cause—a septic process from the intestine which had not been functioning properly for a long time. His patient was a woman of 55 with occlusion of the hepatic and common bile ducts of long standing, several years after removal of the gall bladder. The common bile duct had become obstructed by an inflammatory gallstone process. Permeability was restored for a time and the general condition rapidly improved, but the duct gradually became obstructed again, and the duodenum was then drawn up and sutured to the right lobe of the liver, the capsule being resected over an area of 4 by 5 cm. and the parenchyma to a depth of 7 or 8 mm. All went well for three days but then the temperature rose a little, jaundice developed and the patient succumbed quietly during the night. The liver had been large for a long time and bile spurted from the mouths of the intercellular passages as they were exposed, but these passages were of normal size and they proved insufficient for the task of diverting the bile into the intestine. Unless these intercellular passages are found dilated at first there is reason to suppose that they will retract and close up more or less and thus annul the benefit derived from the anastomosis with the intestine. In Garré's and Jordan's cases in which this operation was successfully done, these small passages were found much distended and the outcome of the operation was satisfactory. Lejars is convinced that this can not be anticipated when these intercellular passages are found of normal size or unusually small.

51. **Surgical Treatment of Cerebral Hemorrhage.**—Lhermitte reviews the few cases in American and British literature in which acute cerebral compression from intracranial hemorrhage was cured by evacuation of the blood, and discusses the indications. He has no personal experience to relate, but states that the measure is liable to give favorable and encouraging results in the cases which are extremely serious from the start, the patient being in deep coma, with hemiplegia persisting unmodified.

52. **Local Hemolytic Icterus.**—Guillain and Troisier discuss the relations between local destruction of blood and local production of bile pigments, especially in reference to the hemolytic process which results in the production of bilirubin in an aseptic pleural hematoma. In a case of the latter reported in detail a stab wound in the back of the left thorax was followed by a hemorrhagic effusion in the pleural cavity. The fluid withdrawn by six punctures in the course of seven weeks contained hemoglobin and bile pigments while the red corpuscles were seen to be extremely fragile. The conditions were identical in a second similar case, both presenting a local hemolytic icterus limited to the pleural cavity, the seat of the trauma, and independent of any morbid process originating in the liver. The puncture fluid was invariably sterile in both cases, and the symptoms observed, fever, leucocytosis, polynucleosis (78.4 per cent. in the first case three weeks after the injury) and signs of a crisis: polyuria and eosinophilia, about the same date, etc., indicate that extravasated blood corpuscles have an actual toxic action outside of any infection. It is interesting to recall in this connection, he remarks, that subarachnoid hemorrhages are also liable to give rise to aseptic inflammatory reactions, the same as a pleural hematoma. The discussion of the subject also throws light on the process known as hemolytic jaundice.

Beiträge zur klinischen Chirurgie, Tübingen

February, LXI, No. 3, pp. 529-804

53 *Bassini Operation for Hernia and its Contraindications. (Zur Anatomie und Technik der Bassini'schen Radikaloperation den Leistenhernien sowie über die Kontraindikationen der selben und über die Hernienoperation bei Kindern.) W. Noetzel.

54 Relations between Cicatrix of Laparotomies and Postoperative Hernia. (Beziehungen der Laparotomienarben zu den postoperativen Bauchbrüchen.) Lindenstein.

55 Congenital Curvature of the Spine from Cleavage of Thoracic Vertebræ. (Spina bifida anterior.) F. Oehlecker.

56 Arteriomesenteric Ileus with Acute Dilatation of the Stomach. (Arterio-mesenterialer Darmverschluss mit akuter Magendilatation.) T. Nakahara.

57 Case of Malformation of Mesentery. (Fall mesenterialer Bildungsanomalie.) M. Kirschner.

58 *Multiple Hydatid Cysts in the Liver. (Zur Kasuistik der multiplen Echinokokken der Leber.) Ehrlich.

59 *Hemophilia and Operative Interventions on Hemophilics. K. Dahlgren.

60 *Idiopathic Dilatation of the Colon and its Surgical Treatment. (Hirschsprung'sche Krankheit; ihre chirurgische Behandlung.) J. E. Schmidt.

61 Retroperitoneal Abscess after Appendicitis. P. Wolff.

62 Operation at Two Sittings for Pressure Diverticulum of the Esophagus. (Die zweizeitige Operation von Pulsionsdivertikeln der Speiseröhre.) E. E. Goldmann.

63 Importance of the Cammidge Reaction for Differential Diagnosis of Pancreatic Affections. W. Hagen.

64 Tumors of the Branchiogenic Organs in Man. (Struma branchialis Getzowa.) O. Mühlhaeuser.

65 Pathogenesis of Subcutaneous Rupture of the Intestines. (Zur Pathogenese der subkutanen Darmrupturen.) K. Borszeky.

66 Treatment of Supracondylar Fracture of the Upper Arm. (Behandlung des suprakondylären Oberarmbruches.) H. Hilgenreiner. Id. H. Coenen.

53. **Inguinal Herniotomy.**—Noetzel discusses the anatomy and technic of the Bassini radical operation for inguinal hernia and its contraindications, and the question of operations for hernia in children. His experience in the clinic and experiments on the cadaver have convinced him that the chief cause of trouble after a herniotomy is that the operator fails to clear the field of all superfluous tissues before starting to suture. There is usually considerable superfluous tissue surrounding an old hernia which is left in the inguinal ring after the hernia proper has been cared for. Anything interposing between the edges to be sutured prevents their proper coaptation. He consequently advocates dividing the cremaster muscle and also the external spermatic artery with its accompanying connective tissue and the transverse anastomoses of this with the accompanying vein. In women the round ligament should be divided and sutured to Poupart's ligament also in the same way, aiming to retain the uterus in its normal position, while the ligament sutured to the muscle below re-enforces it. He does not advise the Bassini technic for infants, preferring a purse-string suture for the hernia and a Czerny suture for the opening.

58. **Multiple Hydatid Cysts in the Liver.**—Ehrlich reports a case of multiple cysts in the liver in a boy of 14 cured by successful surgical intervention on the same principles as for a single cyst. The case is a record-breaker, he says, as none with more than six cysts has been recorded hitherto, although he has compiled from the literature 105 cases of multiple cysts in the liver in which an operation was attempted. The mortality was 30 per cent. He tabulates the details as to the mode of intervention and the outcome.

59. Abstracted in THE JOURNAL, Aug. 8, 1908, page 542.

60. **Idiopathic Dilatation of the Colon.**—Schmidt reports a case in a boy between 4 and 5, in which most excellent results were obtained by resection of 56 cm. of the excessively large descending colon. He gives the details further of 71 cases from the literature in which various surgical measures were applied with good results in many instances. Even after fairly extensive resections, approximately normal conditions in respect to the digestion are soon re-established. Out of 58 cases in which some radical operation was done, 73 per cent. of the patients were completely cured, while only 12 per cent. were cured in 59 cases treated by internal measures alone, and 60 per cent. died. Experiments on dogs indicate the feasibility of substituting a segment of the small intestine for the resected portion of the colon, but this will only rarely prove necessary.

Deutsche medizinische Wochenschrift, Berlin

March 18, XXXV, No. 11, pp. 465-512

67 *Puncture of the Brain and Trephining. (Hirnpunktion und Trepanation.) H. Küttner.

68 *Successful Experimental Transmission of Trypanosoma Brucei by Glossina Palpalis. (Positive Infektionsversuche mit Trypanosoma Brucei durch Glossina palpalis.) Kleine.

69 *Specific Treatment of Gonorrheal Processes. C. Bruck.

70 Acute Interstitial Gastritis. (Akute interstitielle Magenentzündung.) Munter.
71 Hemolysis of Streptococci. W. Zangemeister. Commenced in No. 10.
72 *Progress in Irrigation Endoscopy in Chronic Urethritis. (Leistungsfähigkeit der Irrigationsendoskopie bei chronischer Urethritis.) H. Lohnstein. Commenced in No. 10.

67. **Puncture of the Brain and Trephining.**—Küttner remarks that statistics show that the mortality of extradural hematoma is 90 per cent. under conservative treatment, while under operative measures over 67 per cent. of the patients recovered. Brion even cites 84 per cent. recoveries under operative treatment of intradural hematoma, but Küttner thinks this is too favorable to conform to the facts, although he adds that it is remarkable how perfectly traumatic injuries heal even when there are apparently severe complications. The improvement in asepsis and trephining technic has much improved the prognosis of traumatic intracranial hemorrhage, especially from injury of the middle meningeal artery. The hematoma in this case can be localized by a Neisser puncture. The accumulation of blood should be removed by osteoplastic trephining with finger and spoon and rinsing with salt solution. The traumatic abscesses in the brain give the best prognosis under operative measures, especially when the operation follows the route taken by the abscess in its origin and spread. The results of operation for abscess in the brain and infectious sinus thrombosis are among the most gratifying in all surgery. He regards all cases of epilepsy of pronounced Jacksonian type as requiring surgical intervention. He quotes L. Bruns that tumors in the brain can be localized in fully 75 per cent. of all cases. Success depends on rapidity in operating, correct decision as to whether to operate at one or two sittings, refraining from tamponing as much as possible, and complete closure of the external wound. Palliative trephining is particularly effectual with choked disc. The prospects of retaining vision are favorable if the operation is done when the sight first begins to suffer, but there is not much hope if the sight has already been considerably reduced. Intervention should therefore be early, as also with symptoms of compression from chronic hydrocephalus, serous meningitis or swelling of the brain. Neither lumbar puncture nor Neisser puncture of the brain gives any such results as palliative trephining. The permanent results obtained to date justify, he asserts, the highest hopes for the future from surgery of the brain.

68. **Trypanosomes and Glossina Palpalis.**—Kleine reports from German East Africa experiments which confirm Koch's statements that the *Trypanosoma brucei* passes through its phase of sexual development in the *Glossina palpalis*.

69. **Specific Treatment of Gonorrheal Processes.**—Bruck reports from Neisser's clinic at Breslau experiences which show the possibility of vaccination with gonococci to induce active immunity. The method is liable to prove valuable in gonorrheal complications and general affections which frequently prove refractory to the ordinary measures. It seems to be possible to obtain a cutaneous reaction in gonorrheal patients following inoculation of vaccine.

72. **Irrigation Endoscopy in Urethritis.**—Lohnstein reports extensive experiences with Goldschmidt's method of visual inspection of the urethra distended with a fluid. It was described in THE JOURNAL, June 8, 1907, page 1992. It gives oversight of the urethra throughout, far surpassing that obtained with any other technic of the kind.

Fortschritte der Medizin, Leipsic

March 10, XXVII, No. 7, pp. 257-304

73 *Fibrosarcoma in Cerebello-pontine Angle. (Zur Klinik des Kleinhirnbrückenwinkeltumors.) C. Velhagen.

73. **Tumor in Cerebello-pontine Angle.**—Velhagen was consulted by a girl of 16, apparently in good health, on account of a slight dimness of vision at times. There had been a little nausea and headache a few weeks before and a few months previously she had consulted a physician on account of not being able to hear quite so well with the right as with the left ear. Velhagen found pronounced choked disc in both eyes and diagnosed a tumor at the base of the brain. For two years the failing vision was the only appreciable symptom, then the hearing became defective on both sides. A year later brain symptoms developed, leading to the fatal termination five years after the first symptoms. Autopsy revealed a fibrosarcoma in the cerebello-pontine angle which shelled out readily and probably could have been easily removed at any time. The long persistence of the eye symptoms alone is important for differentiation of such tumors. Deafness gradually spreading to the other side is also instructive, although the existence of an old perforation of the tympanum may prove misleading, as occurred in the case reported. This gradual involvement of the second ear is accounted for by the anatomic conditions as he explains in detail. Klebs estimates the frequency of these cerebello-pontine tumors as one in every fifty-five brain tumors.

Jahrbuch für Kinderheilkunde, Berlin

March, LXIX, No. 3, pp. 251-374

74 Rachitis. M. Kassowitz.
75 Basophilic Granulation of the Red Corpuscles in Embryonal Blood and in Anemic Conditions in Children. (Die basophile Granulation (Punktierung) der roten Blutkörperchen im embryonalen Blut und bei anämischen Zuständen im Kindesalter.) W. von Starck.
76 Metabolic Research on Breast-fed Child with Special Regard to Ammonia Coefficient. (Ein Stoffwechselversuch an einem Brustkinde mit besonderer Berücksichtigung des Ammoniakkoefficienten.) S. Amberg and W. P. Morril.

Medizinische Klinik, Berlin

March 14, V, No. 11, pp. 381-418

77 *Therapeutic Action of Potassium Bitartrate. (Wirkungen des Tartarus depuratus.) H. Eichhorst.
78 Importance of Vestibular Nystagmus in the Diagnosis of Otitic and Intracranial Affections. Wagener.
79 Traumatic Affections of Acromial Bursa. L. Freund.
80 *New Modes of Application of Traction and Compression in Medico-Mechanical Devices. A. Heermann.
81 The Cammidge Reaction in Pancreatic Affections. O. Klauber.
82 Influence of Altitude. (Wirkung des Höhenklimas.) N. Zuntz.

77. **Therapeutic Action of Potassium Bitartrate.**—Eichhorst calls attention to the remarkable efficacy of potassium bitartrate in promoting diuresis. Its influence is only gradually displayed, but it is lasting. He gives it as a routine measure in pleurisy with effusion, but its most striking effect is shown in ascites with cirrhosis of the liver. He reports three severe cases to show the remarkable efficacy of this treatment after failure of other measures. In case of ascites he first excludes tuberculosis, then has the abdomen rubbed with green soap and puts the patient on a light diet with three pints of milk a day and orders:

℞.	gm. or c.c.		
Decocti radicis altheæ, 10:	180		℥xii
Potassii bitartratis	15	or	ʒss
Syrupi simplicis	20		ʒv

The dose is 15 c.c. every two hours, thoroughly shaking the bottle each time. This medication was kept up for four months in one of the cases described and with great benefit. The patients with advanced cirrhosis of the liver lose the ascites, get a good color and appetite, with normal bowel functioning, and gain in strength so that they feel well and hearty. Eichhorst's experience with operative treatment of these cases and with other drugs has been disappointing. Sakaki in Japan uses the bitartrate in much higher dosage. The benefit with Eichhorst's dosage comes on so gradually that one must not be discouraged at first; after a few days the action of the drug is abundantly evident.

80. **Medico-mechanical Apparatus.**—Herrmann gives fourteen illustrations of his application of new principles for medico-mechanical apparatus that can be made and used at home. The first system is a combination of a long lever with a long elastic band as he shows in three illustrations. It is especially useful for active exercise of the elbow, shoulder, hip and knee joints, while reclining. The second principle is a footstool or seat on a cradle rocking base. The foot is placed on a cradle shaped stool which exercises the joints of the ankle and knee in a most surprising manner as it rocks, and sitting or reclining on the rocking seat permits a remarkable variety of exercises of the trunk. The third system

holds the hands and fingers firm while the forearm can be exercised. The fourth is an exercise for the ankle, the foot resting on small balls running in a groove in a long frame. Other devices permit adjustable extension with weights for sciatica. Even more effectual is his method of applying gentle constant compression by means of a row of inelastic straps with buckles, with or without an interposed rubber sponge. He calls this the "comb bandage"; its special advantage is the adjustability of the separate straps. He uses twelve for the leg in phlebitis and three wider ones for the abdomen. The straps can be applied over the underclothes. For hemorrhoids he introduces a sponge into the rectum, leaving it in place up to twenty-four hours. He insists that the efficacy of this "partial stasis" far surpasses that of massage.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

March, XXIX, No. 3, pp. 265-404

83 *Treatment of Placenta Prævia. (Zur Diskussion über die neueren Vorschläge von Krönig und Sellheim.) J. Pfannenstiel. Id. J. Thies.
84 Case of Vaginal Ovariotomy during Childbirth. (Vaginale Ovariotomie während der Geburt.) W. Rühl.
85 Delivery with Contracted Pelvis. (Geburten bei engem Becken.) W. Konopka.
86 *Treatment of Rupture of Uterus. (Zur Behandlung der Uterusruptur im Anschluss an sechs eigene Fälle.) G. Petren.
87 Anatomy and Clinical Importance of Chorioma of the Placenta. E. Eicke.
88 Treatment of Myoma. K. Torkel.
89 *Recurring Tubal Pregnancy. (Wiederholte Tubargravidität.) E. Puppel.

83. **Treatment of Placenta Prævia.**—Pfannenstiel declares that the use of the metreurynter should be taught during the medical course so that all physicians may be able to apply this technic in urgent cases, especially with placenta prævia. The inflatable bag is best introduced, he says, through the speculum after the cervix has been drawn down for the purpose. Special forceps are required of suitable length, curved to fit the pelvis, and smooth on the inner side. An attempt should be made to rupture the fetal membranes and introduce the bag into the ovum. If this proves impossible, the bag may be left below the ovum in the cavity of the uterus without fear of undue separation of the placenta, only the amniotic sac must be ruptured. The fetal membranes are best opened with the forceps carrying the inflatable bag. If this fails, dressing forceps will answer the purpose, the hole being enlarged with the fingers and the bag then introduced. As a general thing it is sufficient to fill the inflatable bag with 500 c.c. of sterile salt solution and hang a weight of 2.2 pounds to it. The bag should not be removed later to allow version or other measures to promote delivery; when the metreurynter is in place it should be left undisturbed until the os enlarges so that the bag is spontaneously expelled. When this occurs the os is then so dilated that the delivery can be terminated at once, possibly requiring internal version and extraction. Thies discusses Cesarean section for placenta prævia, remarking in conclusion that the mortality of the mothers with placenta prævia has already been reduced to 3 or 5 per cent. without Cesarean section and that of the viable children to 10 or 20 per cent. He advocates restricting combined version to extremely urgent cases, those with excessive loss of blood, or hemorrhage during the early part of pregnancy—this broadens still further the field of the metreurynter. Even the most serious hemorrhage can be arrested, he says, by introducing the inflatable bag and pulling lightly on it. The results are less constantly favorable in primiparæ and in women with rigid cervix; vaginal Cesarean section promises well in these cases. It is simple and harmless when the placenta is located on the posterior wall of the uterus. If located on the anterior wall the anterior hysterotomy is best done after a metreurynter has been introduced and the uterus pulled down, making the incision over the inflatable bag and then waiting for its expulsion before terminating the childbirth.

86. **Treatment of Rupture of the Uterus.**—In two of Petren's six cases the rupture followed obstetric maneuvers, but in the others it occurred spontaneously after from ten to thirty-two hours of vigorous labor. There was no sign of the impending rupture in any case except that the contraction ring was almost half way up to the umbilicus in one case over three hours before the rupture finally occurred. This was disregarded, however, as there were no other signs such as taut round ligaments, the persisting character of the labor pains and restlessness on the part of the patient, consequently no attempt was made to perforate and deliver the woman at once. In three instances the rupture was not diagnosed for several hours; in the others collapse or anemia attracted attention to the rupture almost immediately. In three cases labor ceased at once after the rupture; in one case the uterine contractions continued with regular intervals for at least fifteen minutes after the rupture. This is not unusual when the rupture—as in this case—is located in the upper extremity of the vagina. The child escaped into the abdominal cavity in most of his cases and was delivered by a laparotomy as soon as the condition was diagnosed. Oversight of the literature on rupture of the uterus seems to show, he says, that conservative treatment gives better results than operative, but this is a deceptive conclusion as it is invalidated by the prevailing tendency to report only the successful cases.

89. **Recurring Tubal Pregnancy.**—Puppel has encountered two cases of recurring tubal pregnancy. In order to prevent such an occurrence he advocates removing the other tube if it is involved in adhesions or if there is a large hematocele or if drainage of the small pelvis is necessary. The other tube should always be examined, and the abdominal route is preferable on this account.

Münchener medizinische Wochenschrift

March 16, LVI, No. 11, pp. 545-592

90 *Paroxysmal Hemoglobinuria and Hemolysis in the Test Tube. E. Moro and S. Noda.
91 *Influence of Alcohol on Starving Organism. (Einfluss des Alkohols auf den hungernden Organismus.) M. Kochmann.
92 Serodiagnosis of Syphilis. J. K. Beckers.
93 Acute Dilatation of Heart from Overexertion. (Akute Dilatation des Herzens durch Ueberanstrengung.) L. Raab.
94 Hitherto Undescribed Variety of Amenorrhea and its Operative Treatment. A. Rieck.
95 Apparatus for Graphic Registration of the Blood Pressure. (Apparat zur graphischen Blutdruckbestimmung.) H. Stursberg.
96 Nature of Alternating Heart Rhythm. (Wesen des Herzalternans.) G. Galli. Id. H. E. Hering.
97 Roentgen Examination of Gastric Motor Functioning. (Die peristolische Funktion des Magens im Röntgenbilde.) F. Groedel.

90. **Paroxysmal Hemoglobinuria.**—Moro and Noda relate experimental and clinical experiences which confirm in every respect the assumption that the amboceptor in these cases is bound to the erythrocytes only when unheated. When they are warmed the amboceptor is liberated. The temperature tests give classical examples for the clinical relationship between toxic injuries and injuries from chilling—a relationship of which we are constantly encountering evidences in our daily practice. The changes in the blood during the hemoglobinuria paroxysms resembled in every respect those observed in most infections.

91. **Influence of Alcohol on the Starving Organism.**—Kochmann's experiments on rabbits showed that large amounts of alcohol hastened the death of the animals, while small amounts postponed the fatal termination. He thinks that these results throw light on the benefit from small amounts of alcohol during febrile affections, etc., in which the intake of food must be reduced, while large doses have a directly injurious action.

Wiener klinische Wochenschrift, Vienna

March 18, XXII, No. 11, pp. 363-400

98 *Nature of Anaphylaxis. (Experimentelle Studien über Anaphylaxis.) A. Biedl and R. Kraus.
99 *Transplantation of Thyroid. (Zur Frage der Schilddrüsentransplantation.) H. Salzer.
100 Nature of Syphilis. (Ueber das Wesen der luetischen Erkrankung auf Grund der neueren Forschungen.) E. Weil and H. Braun.
101 Differential Diagnosis of Appendicitis, Nervous Pseudoappendicitis and Diseases of the Ovaries and Fallopian Tubes. P. Profanter.

98. **Nature of Anaphylaxis.**—Biedl and Kraus report the details of experimental research which has shown that the so-called anaphylactic reaction is characterized by a symptom-

complex consisting of vasodilation and its consequences, from peripheral paralysis of the vessels, reduction of the coagulating power of the blood and changes in the morphologic blood picture. It is further distinguished by the fact that it can be induced once and only once within a certain period of time. They further call attention to the fact that this syndrome is identical in every respect with the well known action of the peptone produced by artificial digestion of albumin; most of the experiments recorded were made with the commercial Witte peptone. The syndrome induced in dogs by injection of this peptone is identical, to the smallest details, with the reaction known as anaphylaxis. It seems evident that the anaphylactic intoxication is induced by some poison, which may be regarded as identical with Witte's peptone.

99. **Transplantation of Thyroid.**—Salzer has been experimenting on rabbits, the results encouraging further attempts to supply the missing function by implantation of thyroid tissue. The best results will certainly be obtained with repeated implantation of small scraps, and for this it is better to implant the scraps in the subcutaneous tissue (Cristiani) or in the peritoneal tissue (von Eiselsberg).

Zentralblatt für Chirurgie, Leipsic

March 13, XXXVI, No. 11, pp. 369-408

102 *Ether Anesthesia by Rectum. (Zur rektalen Aethernarkose.) E. W. Baum.
103 Transperitoneal Incision of Bladder. (Zur transperitonealen Eröffnung der Blase.) L. R. v. R.-Rydygier.
104 Device for Supporting Pelvis in Operations. (Eine neue Beckenstütze). Langemak.
105 Modification of Dahlgren's Forceps. (Zur Modifikation der Dahlgren'schen Zange.) M. Borchardt.

102. **Ether Anesthesia by the Rectum.**—Baum was encouraged by the favorable experience of Dumont, summarized in THE JOURNAL, Feb. 6, 1909, page 515, to give ether by way of the rectum. He followed Dumont's technic in eight cases. The results were apparently ideal in the first few cases, but then occurred two fatalities which opened his eyes to the immense danger of attempting to anesthetize a patient by this route. In these two cases the intestines had been so injured by the action of the ether that profuse hemorrhage (680 c.c. within forty-eight hours) followed in one case, and in the other the cecum became gangrenous and perforated. Besides these two fatal cases the autopsy in another case in which the anesthesia had been apparently ideal showed that the large intestine was spasmodically contracted and covered with numerous ulcerations, partly healed. The patient had succumbed to the heart complications of cancer of the breast. He believes that if any of the other patients had happened to die not long after the anesthesia similar lesions in the intestines would have been discovered. He attended to the rectal anesthesia himself and is confident that no fluid ether got into the rectum. He warns that rectal anesthesia—at least in its present form—is altogether too dangerous for ordinary use.

Zentralblatt für Gynäkologie, Leipsic

March 13, XXXIII, No. 11, pp. 377-408

106 Injurious Influence of Scopolamin on Pulse and Temperature. (Ueber den angeblichen nachteiligen Einfluss des Skopolamins auf Puls und Temperatur.) H. Sieber.
107 *Ventrofixation of Vagina in Absence of Uterus. (Ventrifixur bei fehlendem Uterus.) M. Gerschun.
108 Date of First and Last Menses in Jewish and other Russian Women. (Menarche und Menopause bei Jüdinnen und Russinnen in Südrussland.) S. Weissenberg.

107. **Treatment of Uterine Prolapse.**—Gerschun declares that total removal of the uterus is not the best treatment for prolapse, as prolapse of the walls of the vagina is liable to follow. This has occurred in two cases on record, and he reports a third requiring ventrofixation long after hysterectomy.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 23, XXX, No. 23, pp. 241-248

109 Advantages of Local Anesthesia in Extirpation of Goiter. (Osservazioni sull'estirpazione del gozzo.) E. Truffi.

February 25, No. 24, pp. 249-256

110 Hysterical Hematemesis. G. Pomarico.

February 28, No. 25, pp. 257-272

111 Complement Fixation in Diagnosis of Anthrax. (Studi sul carbonchio.) A. Paccanaro.

March 4, No. 27, pp. 281-288

113 Pathogenesis of Arteriosclerosis and Atheromasia. S. Lavagna.

March 7, No. 28, pp. 289-304

114 Therapeutic Value of Scarlet Red. (Scharlachrot.) Sprecher.

March 14, No. 31, pp. 321-336

115 *Autocholecystectomy. (Colecistectomia per via naturale colica?) E. Leonardi.

115. **Autocholecystectomy.**—Leonardi gives an illustration of a bunch of tissue passed through the rectum by a man of 57 who had suffered for a few years from pains suggesting cholelithiasis. He took a course of mineral waters and not long after passed the specimen described. It proved to be the inflamed and ruptured gall bladder. Leonardi thinks that the gall bladder must have sunk down into the adjoining loop of intestine, causing invagination, and final segregation and expulsion of the gall bladder as a foreign body.

Riforma Medica, Naples

March 15, XXV, No. 11, pp. 281-308

116 *Action of Extract of Tuberculous Lymph Glands on Course of Experimental Tuberculosis. (Dell'azione che gli estratti di tessuto linfatico tubercolare esercitano sulla evoluzione della tubercolosi sperimentale.) S. Livierato.

116. **Extract of Tuberculous Lymphatics in Experimental Tuberculosis.**—Livierato found that injection of an extract of tuberculous lymph glands had a notable effect in attenuating the tuberculous process in guinea-pigs injected with it.

Hospitalstidende, Copenhagen

February 17, LII, No. 7, pp. 177-224

117 *Specific Action of Serum in Anaphylaxis and Possibility of Utilizing it to Distinguish Between Human and Animal Origin of Blood Stains. (Om Serumanafylaxiens Specificitet og om Muligheden af at anvende denne i den medikoforensiske Praxis til Afskillelse mellem Menneske- og Dyreblod i Blodpletter, etc.) O. Thomsen.

March 3, No. 9, pp. 249-296

118 *Vaccine Therapy of Staphylococcus Affections. V. Jensen.
119 *Value of Preventive Injections of Diphtheria Antitoxin. (Om en Difteriepidemi paa Middlefart Sindsygeanstalt.) A. T. Jacobsen.

March 10, No. 10, pp. 297-320

120 Sickness among Printers and Typesetters at Copenhagen. (Sygeligheden hos de mandlige Arbejdere i de københavnske Bogtrykkerier.) H. Bille-Top.
121 Importance of Serodiagnosis of Syphilis from Standpoint of Treatment. (Betydningen af Wassermanns Reaktion «for Behandlingen af Syfilis.) H. Boas.

March 17, No. 11, pp. 321-360

122 Connection between the Number of White Corpuscles and Variations in the Pulse Pressure. (Om Sammenhaeng mellem Antal af hvide Blodlegemer og Variationer i Pulstryk.) S. A. Heyerdahl.
123 Radical Operation for Femoral Hernia. O. V. Lassen.

117. **Forensic Tests of Blood Stains with Anaphylactic Serum.**—In this communication from the state serum institute, Thomsen relates extensive experiments which confirm the possibility of utilizing the "quantitative specificity" of the serum of animals in which anaphylaxis has been induced as a means to determine the human or animal origin of blood spots. The technic is comparatively simple, as guinea-pigs can be easily rendered anaphylactic to the homologous serum by means of an aqueous extract of the blood spot in question. The technic he found best adapted for the purpose is described in detail and also the tests made with blood from six different species of animals or fowls and with human blood, the specific findings with each confirming the reliability of the test.

118. **Vaccine Treatment of Staphylococcus Affections.**—Jensen has applied Wright's method of vaccine treatment in twenty cases, as he relates with particulars, the results encouraging the further use of this method of treatment, especially for recurring furuncles, etc.

119. **Preventive Injections of Diphtheria Antitoxin.**—Jacobsen states that only 18 patients developed diphtheria among the 818 inmates of an insane asylum treated with preventive injections of antitoxin to arrest an epidemic of diphtheria in the asylum. In the 18 cases in which diphtheria developed notwithstanding the injections the disease had an unusually mild course. In one case the symptoms appeared two days after the injection, showing that the infection must have been

already under way; in the others the first symptoms appeared between the eleventh and thirty-seventh day afterward. Maag has reported 3 cases developing after preventive injection of 423 patients. All agree that to abort an epidemic, isolation of the sick is necessary until they are free from bacilli. He adds in conclusion that the cannulas used to make the injections sometimes become clogged with coagulated serum as they are boiled. This can be prevented by placing the cannulas in a solution of pepsin after using; this will eat out the serum in the interior. He also describes a simple box method of disinfecting the letters sent out by the sick.

Norsk Magazin for Lægevidenskaben, Christiania

March, LXX, No. 3, pp. 169-296

124 Low Bronchoscopy for Removal of Foreign Bodies in the Lungs. (Fremmedlegeme i lungen. Bronchoscopia inferior. Fjernelse af fremmedlegemet, helbredelse.) V. Uchermann.
125 The Art of Embalming, Past and Present. (Om fortids og nutids balsameringskunst.) H. Hopstock.
126 *Tumors in the Nerves and Multiple Neurofibromatosis. (Neurofibromatose.) F. Harbitz. Commenced in No. 2.
127 Fifty-four Cases of Acute Appendicitis. J. Roll.
128 *Opsonic Index in Tuberculosis. S. Widerøe.

126. **General Neurofibromatosis.**—In this second installment of his monograph Harbitz gives 21 photographs of several cases of multiple neurofibromatosis, his experience including 15 patients with this affection. The 11 cases described in detail represent the various types of von Recklinghausen's syndrome. In one case of congenital elephantiasis the affection had occurred in five generations, affecting 6 female and 3 male members of the family. The legs alone were involved in the present case. The nerves were unmistakably the source of the elephantiasis, as was shown by the postmortem microscopic examination, in addition to the multiple neuromas and pigment spots found scattered over the body and the pronounced inherited taint. There is no doubt that this is merely one form of general neurofibromatosis. The article is to be continued.

128. **Opsonic Index in Tuberculosis.**—Widerøe found that the opsonic index in 50 tuberculous patients ranged from 0.51 to 1.30, averaging 1.01, while in 50 non-tuberculous the range was from 0.46 to 1.44, the average 0.92.

Ugeskrift for Læger, Copenhagen

March 4, LXXI, No. 9, pp. 219-246

129 *Nature and Treatment of Paralytic Dementia. (Nyere Bidrag til Spørgsmaalet om Dementia pareticas Natur og Behandling.) F. Hallager. Commenced in No. 7.

129. **Nature and Treatment of Paralytic Dementia.**—Hallager expresses surprise that more attention has not been paid to the theory advanced by W. Ford Robertson, on the ground of bacteriologic and clinical evidence, that general paralysis is the result of chronic toxic infection dependent especially on the abundant growth of a diphtheroid bacillus or other germ which gives the disease its special paralytic character. It is evident that the majority of paralytics have or have had syphilis. But the paralysis can not be regarded as the direct consequence of the syphilitic infection. The syphilis is merely one agent that contributes to the weakening of the natural immunity by impairing the general and local defensive mechanisms. Hallager says that there are no theoretic objections to accepting Robertson's *Bacillus paralyticans* as the direct causal agent. But the question can not be decided until Robertson's results have been confirmed by others. His success with the vaccine and antiserum made from the patient's own bacteria are so striking that they deserve wide attention. Hallager comments on the striking similarity between sleeping sickness and general paralysis. Both come on with weakness, ataxia, epileptiform attacks and spastic contractures; in both diseases there is a striking lymphocytosis in the cerebrospinal fluid and autopsy shows a diffuse inflammatory process in the brain. Robertson's experiments with mice and rats have resulted in the production of an affection which both clinically and in its pathologic and anatomic aspects resembles very closely paralytic dementia in man. Hallager is now cooperating with Madsen to apply this vaccine treatment according to Robertson on an extensive scale, the state serum institute and insane asylum at Aarhus working together. The pathologic changes will probably be found irreparable, but the symptoms due to the direct action of toxins may be arrested by the antitoxin. It is even possible, he adds, that a similar antitoxin may be made for alcoholics, which will counteract or neutralize the toxic action of the alcohol.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE PSYCHOLOGY OF DEMENTIA PRAECOX. By Dr. C. G. Jung, Privat-Docent in Psychiatry, University of Zurich. Authorized Translation with Introduction by Frederick Peterson, M.D., Professor of Psychiatry, Columbia University, New York, and A. A. Brill, Ph.B., M.D., Assistant in Psychiatry, Columbia University, New York. Paper. Pp. 153. Price, $2. New York: The Journal of Nervous and Mental Diseases Publishing Co., 1909.

RUDIMENTS OF LATIN. With Special Reference to the Nomenclature of the U. S. Pharmacopeia, the National Formulary and the Text-Books in Materia Medica and Botany. Including also Prescription Writing and Notes on the Nomenclature of the German Pharmacopœia. By Julius Williams Sturmer, Ph.G., Professor of Pharmacy, Purdue University, Lafayette, Ind. Cloth. Pp. 92. Price, $1. Published by the author.

TEXT-BOOK OF EMBRYOLOGY. By Frederick Randolph Bailey, A.M., M.D., Adjunct Professor of Histology and Embryology, College of Physicians and Surgeons (Med. Dept. Columbia Univ.) and Adam Marion Miller, A.M., Instructor in Histology and Embryology, College of Physicians and Surgeons (Med. Dept. Columbia Univ.). Cloth. Pp. 672, with illustrations. Price, $4.50. New York: William Wood & Co., 1909.

DISEASES OF THE PHARYNX AND LARYNX. By Dr. E. J. Moure, Surgeon in Charge of the Nose, Ear and Throat Department of the Faculty of Medicine, Bordeaux. Translated and Adapted by J. Malcolm Farquharson, M.B., F.R.C.P., Lecturer on Diseases of the Nose, Ear and Throat in the School of Medicine of the Royal College, Edinburgh. Cloth. Pp. 403, with illustrations. Price, $4. New York: Rebman Co., 1909.

PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION AT THE FIFTY-SIXTH ANNUAL MEETING, HOT SPRINGS, ARK., SEPTEMBER, 1908. Also the Constitution, By-Laws and Roll of Members. Cloth. Pp. 1203. Baltimore: Published by the American Pharmaceutical Association, 1908.

A MANUAL OF PRACTICAL *X*-RAY WORK. By David Arthur, M.D., D. P. H., Medical Officer in Charge of *X*-Ray Department, West London Hospital, and John Muir, M.B., Ch.B., and B.Sc. (Pub. Health.) Cloth. Pp. 244, with illustrations. Price, $2.50. New York: Rebman Co., 1909.

MEDICO-CHIRURGICAL TRANSACTIONS. Published by the Royal Medical and Chirurgical Society of London. Volume the Ninetieth and Last. (Series 2, Vol. LXXII.) Session 1906-7. Cloth. Pp. 721. London: Longmans, Green & Co., Paternoster Row, 1907.

SPECIAL HOSPITALS—THEIR ORIGIN, DEVELOPMENT AND RELATIONSHIP TO MEDICAL EDUCATION, THEIR ECONOMIC ASPECTS AND RELATIVE FREEDOM FROM ABUSE. By Richard Kershaw. Paper. Pp. 72. London: Geo. Pulman & Sons, Ltd.

THE THEORY OF IONS. A Consideration of Its Place in Biology and Therapeutics. By William Tibbles, M.D. (Hon. Causâ), Chicago, LL.D., L.R.C.P.E., M.R.C.S., L.S.A., etc. Cloth. Pp. 131. Price, $1. New York: Rebman & Co., 1909.

ERADICATING PLAGUE FROM SAN FRANCISCO. Report of the Citizens' Health Committee and an Account of Its Work. Cloth. Pp. 313, with illustrations. Prepared by Frank Morton Todd, Historian for the Committee, 1909.

THE EMMANUEL MOVEMENT IN A NEW ENGLAND TOWN. By Lyman P. Powell, Rector of St. John's Church, Northampton, Mass. Cloth. Pp. 194, with illustrations. Price, $1.25. New York: G. P. Putnam's Sons, 1909.

THE MATTER WITH NERVOUSNESS. By H. C. Sawyer, M.D., Member of the American Medical Association. Cloth. Pp. 210. Price, $1. San Francisco: Cunningham, Curtiss & Welch. 1909.

MEDIZINAL-BERICHTE ÜBER DIE DEUTSCHEN SCHUTZGEBIETE FÜR DAS JAHR 1906/07. Herausgegeben vom Reichs-Kolonialamt. Berlin, 1908. Cloth. Pp. 324. Price, 7.50 marks.

AN EPITOME OF DRUGLESS METHODS USED SUCCESSFULLY IN TREATMENT OF ACUTE AND CHRONIC DISEASES. By J. W. Bolton, M.D. Paper. Pp. 32. Price, 25 cents.

THE INTERNATIONAL MEDICAL ANNUAL; 1909. Twenty-seventh Year. Cloth. Pp. 683, with illustrations. Price, $3.50. New York: E. B. Treat & Co.

REASONS FOR FOOD REFORM. Paper. Pp. 40. Price, three pence. London: National Food Reform Association, 40 Chandos Street, Charing Cross.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA. Vols. for 1907 and 1908. (State Board of Health.) Cloth.

THIRTY-FIFTH ANNUAL REPORT OF THE MEDICAL DIRECTOR OF THE CINCINNATI SANITARIUM, 1908. Paper. Pp. 16.

SAINT MARY'S GENERAL HOSPITAL, LEWISTON, ME. SIXTEENTH ANNUAL REPORT, 1908. Paper. Pp. 71.

NINETEENTH ANNUAL REPORT EASTERN INDIANA HOSPITAL FOR THE INSANE, 1908. Paper. Pp. 82.

TWENTIETH ANNUAL REPORT OF THE GRACE HOSPITAL, DETROIT, MICHIGAN. Paper. Pp. 61.

ANNUAL REPORT OF THE CANTON HOSPITAL, 1908. Paper. Pp. 36.